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The



CHEMIST AND DRUGGIST

Established 1859

28 Essex Street, Strand, London, W.C.2

Registered as a Newspaper

No. 2925
VOL. CXXIV

FEBRUARY 29, 1936

Annual Subscription (with
Diary) 20/- Single Copies 9d.**ETHER****CHLOROFORM**

**Two Anæsthetics with a reputation of over eighty years.
Second to none in purity, reliability and stability**

**These are now the only labels
under which our Anæsthetic
Ether and Chloroform are issued**



J. F. MACFARLAN & CO.

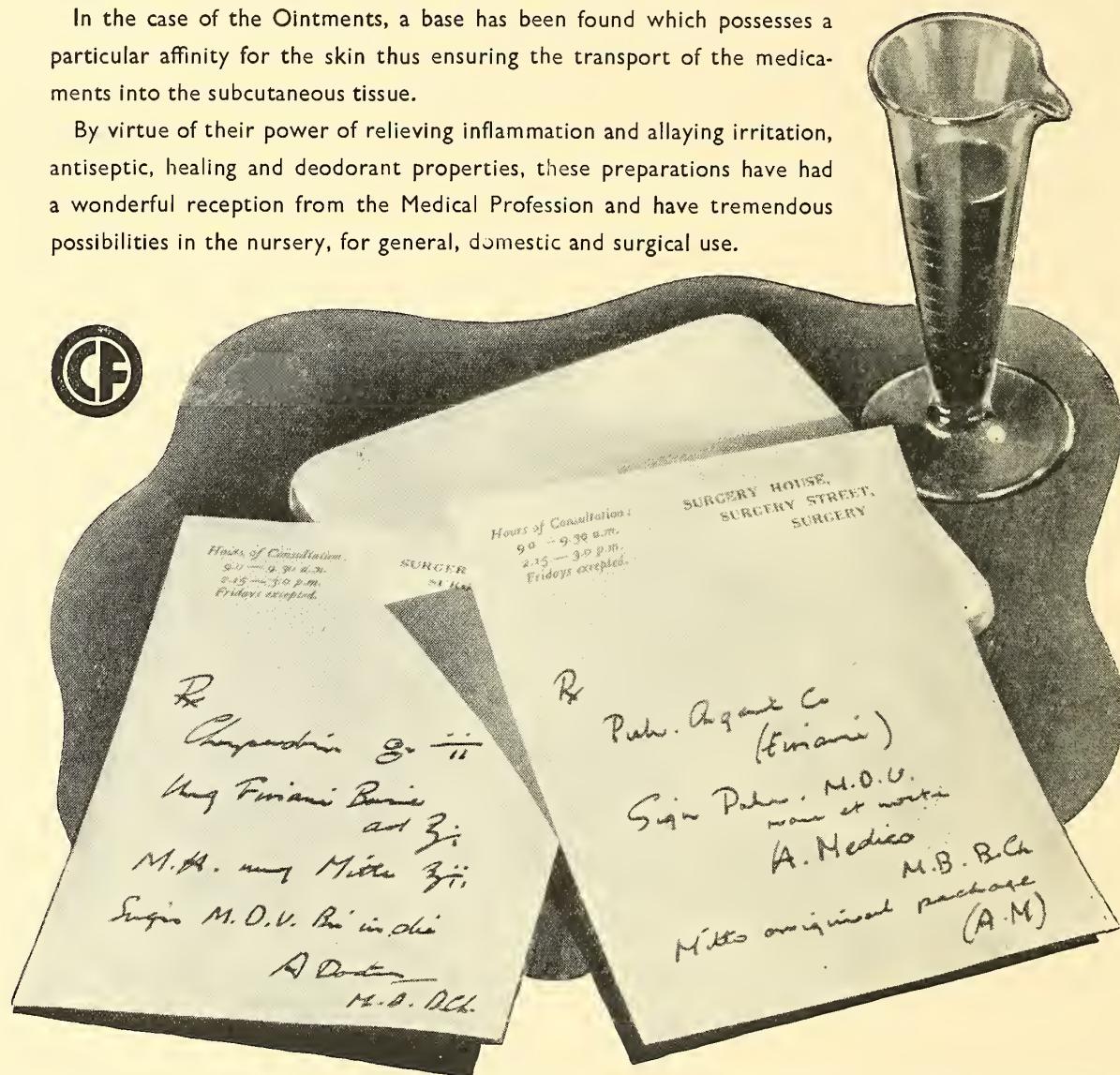
109 ABBEYHILL, EDINBURGH. 32 BETHNAL GREEN RD., LONDON, E.1. Works: Abbeyhill and Northfield, EDINBURGH

Gets under the skin

The Fissan brand products contain a valuable application for the skin, a lactalbumin colloid, with a marked power of reducing inflammation and relieving irritation, and which is rendered exceedingly more effective by virtue of the large surface imparted to it from the addition of a remarkably light synthetic Fluoro-Silica Colloid, used as a distributor in all the preparations.

In the case of the Ointments, a base has been found which possesses a particular affinity for the skin thus ensuring the transport of the medicaments into the subcutaneous tissue.

By virtue of their power of relieving inflammation and allaying irritation, antiseptic, healing and deodorant properties, these preparations have had a wonderful reception from the Medical Profession and have tremendous possibilities in the nursery, for general, domestic and surgical use.



You will be getting prescriptions like these
.... can you meet them?

A brochure entitled "An Advance in skin Therapeutics," with a section on the formation of prescriptions, will be gladly supplied on application to:—SOLE DISTRIBUTORS, GENATOSAN LIMITED, LOUGHBOROUGH, LEICESTERSHIRE.



Are you selling THE SUCCESSFUL BABY FOOD?

Every week more and more mothers are putting their babies on to Ostermilk.

Are you getting the *extra* business from this successful baby food?

Remember that Ostermilk, unlike all other milk foods, is not just a food for the few. *Every mother can afford it.* It costs no more than Grade A milk and thus can bring back to you, against dairy competition, the baby food trade that is rightly yours.

Ostermilk has every quality that the most expensive foods can offer. And it ensures continuous progress (there are *two* Ostermilk foods) which means that it also ensures continuous business for you, not only in Ostermilk but also in the many other lines that a mother buys from a pharmacy. When you sell Ostermilk you make a good customer and a staunch friend.

Ostermilk
No. 1 (yellow
tin) for young
babies.

Ostermilk
No. 2 (blue
tin) for older
babies.

Display

OSTERMILK

The milk foods every mother can afford

OSTERMILK, GREENFORD, MIDDLESEX. BYRon 3434

Each
only
2/-
PER
16 oz.
TIN
Making 5½ pints of food

"THE WIGGLESWORTH WAY" announces a



OPAS
Brand

MACLEAN
STOMACH DIGESTIVE

**WINDOW DISPLAY
CONTEST OF
POWDER.**

SECOND PRIZE
£100
PLUS £10 STAFF PRIZE

FIRST PRIZE
£200
PLUS £20 STAFF PRIZE

THIRD PRIZE
£50
PLUS £5 STAFF PRIZE

85 OTHER PRIZES

TEN PRIZES OF FIVE POUNDS EACH
TWENTY-FIVE PRIZES OF TWO POUNDS EACH
FIFTY PRIZES OF ONE POUND EACH

TOTAL PRIZES **£535**

ALSO EVERY ENTRANT WILL RECEIVE 7/6 WORTH (retail value) OF OPAS POWDER ON RECEIPT OF THE PHOTOGRAPH.

Sole Judge : **MR. RICHARD HARMAN** (*Editor of "Display"*)

Here is a chance to win £200, but it is also a friendly challenge to all Chemists in CF to demonstrate what their support and good-will mean to the manufacturer.

During March and April our publicity is placed entirely with you. Opas Powder is well established and shows you a packed goods profit on an advertised line.

SIMPLE CONDITIONS — NO ENTRY FEE

1. To be displayed for not less than two consecutive weeks between March 2nd and April 30th, 1936.
2. A photograph (P.C. or larger) with official entry form affixed to be posted to reach us during the first week of the display and not later than April 25th.
3. All photographs become the property of Wiggleworth Ltd.
4. This competition is strictly limited to those entitled to sell CF lines or all qualified Chemists in areas where the CF scheme is not yet operating.
5. On request, every entrant will receive a generous supply of display material, but it is not a condition that these cards only must be used, as points will be awarded for originality as well as for selling power and prominence given to the display. IT IS, HOWEVER, OBLIGATORY THAT A SMALL COUNTER UNIT WHICH WILL BE SUPPLIED FREE MUST BE DISPLAYED ON THE ENTRANT'S COUNTER DURING THE FULL PERIOD THE DISPLAY IS IN THE WINDOW.

Tear off

Attach your gum-slip
here and post at once

TO WIGGLESWORTH LTD., WESTHOUGHTON LANCS.

Please forward an Entry Form with full details of OPAS Contest by return of post.

"C"

Retailers who understand Advertising*

★ Up-to-date information about advertising methods gives the retailer a better chance of deciding wisely when a traveller urges him to stock goods 'because they are advertised.' Retailers who know the wisdom of this will be interested in the information on this page.

IF A TRAVELLER tells you that his product is advertised in the Radio Times you can assume that a sufficient number of your customers know of it and its merits to make that product profitable to stock. The Radio Times not only reaches two and a half million families with money to spend but is constantly referred to by those families on each of the 7 days of its life. Women, who purchase 80% of all goods, read it as much as men. And the advertisements stand a particularly good chance of being seen and absorbed because the Radio Times is on listeners' laps when they are at leisure. The coming of the 'fat stock prices' means to most people the turning over of pages. They wish to 'fill in time' and can hardly help seeing the advertisements and studying them. In a letter to the Radio Times an advertiser writes: 'The response (from the Radio Times) has been little short of phenomenal,' and scores of similar letters have been received.



The advertisers below regularly use the Radio Times and are therefore assured of a steady demand. *Radio Times readers respond to advertising.* The second half of this list will be published in the next Radio Times announcement in this journal.

ROBINSON'S LEMON BARLEY WATER · IZAL
 ROBINSON'S PATENT BARLEY · VIROL
 GIBBS' SHAVING CREAM · IRVONA · VIONASE
 YARDLEY LAVENDER WATER · KLEENEX
 PEARS' GOLDEN GLORY SOAP · SELO FILMS
 HALEX BRUSHES · SILVIKRIN · PALMOLIVE
 THERMOGENE VAPOUR RUB · FEEN-A-MINT
 ANDREWS' LIVER SALT · JEYES' FLUID
 MOORLAND'S TABLETS · LUX TOILET SOAP
 POND'S COLD CREAM · SLOAN'S LINIMENT
 LADY GAY PERFUME · VENOS COUGH CURE
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 PHOSPHERINE · GERMOLENE · KALZANA
 JOCIGARES · CROOKES' HALIBUT LIVER OIL
 HARLENE · CALIFORNIAN POPPY PERFUME

GOODS SELL QUICKLY WHEN THEY'RE ADVERTISED IN THE

RADIO TIMES

GUARANTEED AVERAGE NET SALES FOR 1936—2,600,000 PER WEEK

"RAYGLO" & "RED RING"

PACKED PHARMACEUTICALS FOR THE CHEMIST

Our name now appears
in the N.P.V.'s official list of
Chemists' Friends

MORE THAN

230

preparations are in-
cluded. Too many
to enumerate.

CUPAL LTD. BLACKBURN

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[Continued overleaf.]



QUALITY PRODUCTS

A MODERN TREATMENT FOR ARTERIO SCLEROSIS

This preparation has only been added to our list of therapeutical products after many and prolonged experiments conducted by our medical friends, to whom we gladly acknowledge thanks for valuable co-operative assistance.

TABELLAE SPHYGMONE

Lowers blood pressure without depressing effects on the patient. We have had gratifying reports to the effect that treatment with Sphygmone lowers the systolic pressure with relatively little change in the diastolic, and hence a lower pulse pressure. Reports of general improvement in health in cases of SENILE ARTERIO SCLEROSIS are also to hand. The dose is one or two tablets 3 times a day. You can recommend these tablets with confidence in all cases of ARTERIO SCLEROSIS.

PRICE :	100 5/-	250 10/-	1,000 32/-
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MANUFACTURING CHEMISTS

Bridge Street, MANCHESTER

'Phone: BLACKfriars 3895/6, 7435

(2)
'Grams: "Salicylate, Manchester."

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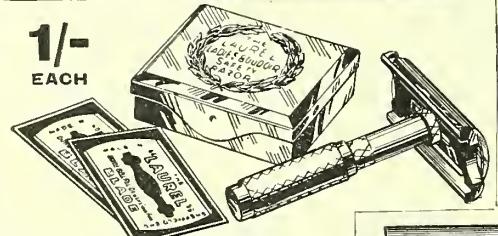
SHAVE WITH A "LAUREL"

"LAUREL PENNY BLADES—ALL TYPES"

"LAUREL"
LADIES' BOUDOIR
SAFETY RAZORS
(NICKEL PLATED)



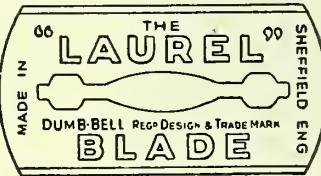
1/-
EACH



**THE "LAUREL" LADIES'
GOLD PLATED BOUDOIR
SAFETY RAZOR**

COMPLETE WITH TWO BLADES AS
ILLUSTRATED

**PENNY
BLADES
FOR YOUR RAZOR
PACKET OF SIX
BLADES FOR
6d.**



FITS ALL 3-PEG HOLDERS



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**TWO
BOYS
WALKING**



**take
twice as
long as
ONE BOY
RIDING A**



RALEIGH ALL-STEEL CARRIER

DELIVERY is becoming more and more the factor which decides the choice of purchase. The faster you can deliver, the farther you can deliver, the bigger your trade will become. One Raleigh Carrier can deliver as much as two boys and go twice as far in the time. And it would actually cost less than what you'd pay out in a year for one extra boy on Saturdays. Don't forget, either, that a Raleigh Carrier is built to withstand hard wear and rough usage in all weathers. Worth thinking about . . . isn't it?

STANDARD CARRIER

£6.19.6 (Cash) or 5/- down and 12 monthly payments of **13/7.** 22-inch frame. (as illustrated)

LOW GRAVITY CARRIER

At same price and terms as above. 22-inch frame

Specially designed for carrying heavy or bulky loads without skidding—20-inch front wheel and larger basket fitment. An instantly operated stand built into the carrier is an important feature. EVERY RALEIGH CARRIER CYCLE has the finest equipment . . . BROOKS' SADDLE, DUNLOP TYRES, etc., etc.

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THROAT TABLETS

THE THROAT TABLET
with a reputation of over
a QUARTER of a
CENTURY

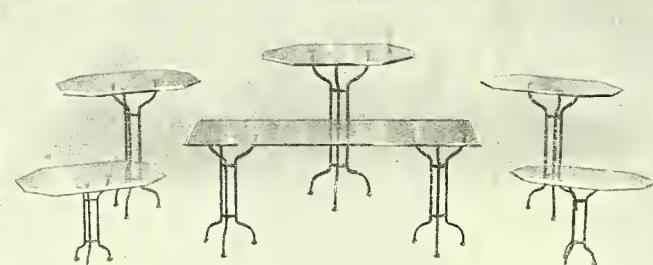


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LEADING PAPERS
SHOWS A PROFIT
OF OVER **60%**



THOS. GUEST & CO. LTD.
CARRUTHERS STREET - MANCHESTER 4

★ KING'S FOR WINDOW DISPLAY FITTINGS ★



KING'S "BROMPTON" DISPLAY SET

Consisting of the following units

- 2 Metal Tripods, 9 ins. high, fitted with Rubber Studs at Top and Bottom
- 2 " " 12 " "
- 2 " " 15 " "
- 1 " " 18 " "
- 2 First Quality Glass Octagons, size 12" x 9" x $\frac{1}{4}$ " Polished and Bevelled edges
- 2 " " " 14" x 10" x $\frac{1}{4}$ " "
- 1 " " " 18" x 12" x $\frac{1}{4}$ " "
- 1 First Quality Glass Oblong, size 30" x 10" x $\frac{1}{4}$ " Polished Edges "

No. H 3920

Brown Bronze Finish

The Set **30/-** Complete

No. H 3921

Chromium Plate Finish

The Set **42/-** Complete

No. H 3249 Round Section Metal Display Pedestals. Fitted with Rubber Studs at Top and Bottom.

Brown Bronze Chrome	Height	Finish	Plate Finish
9 ins.	1/3 each	2/6 each	
12 "	1/6 "	3/0 "	
15 "	1/9 "	3/9 "	
18 "	2/3 "	4/6 "	
21 "	2/9 "	5/3 "	
24 "	3/3 "	6/0 "	
30 "	3/9 "	7/6 "	

No. O.K. 256. First Quality Glass Ovals, $\frac{1}{4}$ " Thick, Polished Edges, for use with the above Pedestals.

Size	10 ins.	7 ins.	... 1/5 each
" 12 "	x 9 "	...	1/6 "
" 14 "	x 10 "	...	2/2 "
" 16 "	x 9 "	...	2/6 "
" 18 "	x 12 "	...	3/6 "
" 20 "	x 15 "	...	4/0 "
" 24 "	x 18 "	...	5/9 "

WE WILL BE PLEASED TO FORWARD OUR LATEST CATALOGUE OF FITTINGS NO. 1013 POST FREE ON APPLICATION

J. C. KING LTD. :: 42-60 GOSWELL ROAD :: LONDON, E.C.1

PHONES: CLERKENWELL 2316 (PRIVATE BRANCH EXCHANGE)

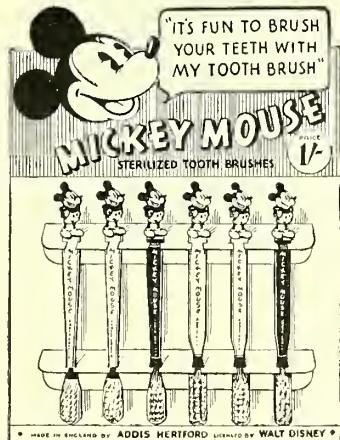
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a grand
New Addition

Mickey Mouse Nailbrush
Backs Assorted Colours
Price.....5/6 per dozen
Retail.....9d. each



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MICKEY MOUSE



Mickey Mouse 1/- Toothbrush
Price 7/9 per dozen



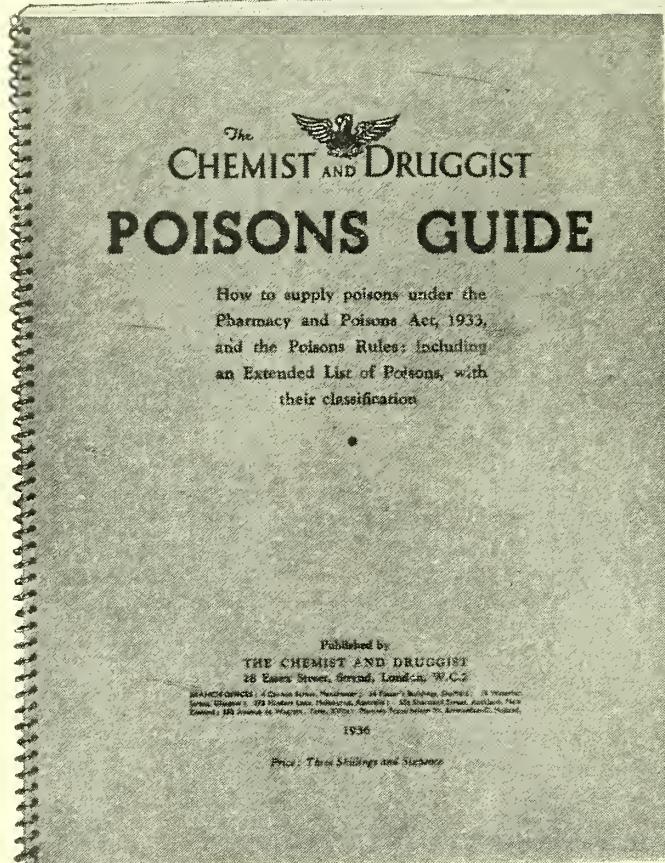
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Price 3/10 per dozen

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PRICE **3/6** 3/9 Post Free

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Please send me copy copies of The Chemist and Druggist "Poisons Guide"

SUPPLIES MAY ALSO
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WHOLESALE.....

Affix
Address
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"Maw's certainly support chemists in every way. Distribution of Maw professional merchandise is confined to recognised channels. Their fancy goods are second to none. They are certainly fighting for all they are worth to help chemists. If you doubt what I say, read their January 'M.S.S.' and particularly the leading article in it."

going! . . . going! . . . **SOLD**

Get your share of profits from this quick sale brushless shaving cream by stocking it now. Latest sale figures are increasing daily as a result of the large advertising campaign now in motion.

And because Morning Pride is a sound product, your customers will buy it again, and again . . . and again.

MORNING PRIDE

THE RAZOR READY BRUSHLESS SHAVING CREAM
PRODUCT OF FAIRY DYES, LTD., PHARMACEUTICAL DEPT.

SOLE DISTRIBUTORS · FASSETT & JOHNSON LTD

86 CLERKENWELL ROAD LONDON E.C.1



THE
"Lady Nicotine"
Regd.
A popular Ladies' Brush

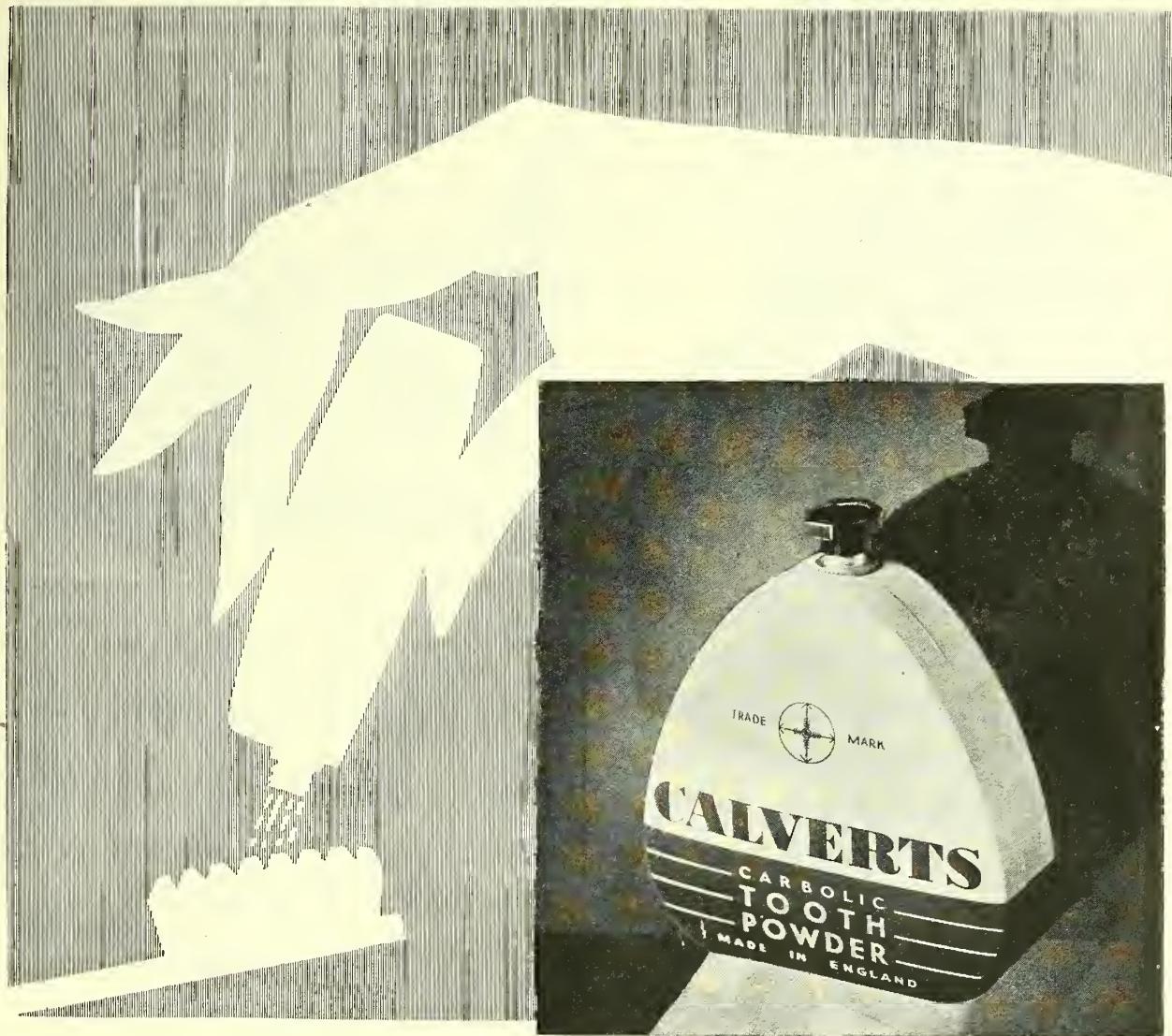
Lady Nicotine

W. R. TILBURY & SON
47 Frampton Park Rd., London,
Est. 1880

THE SUPER BADGER BRUSH COMPANY LTD.
MANUFACTURERS OF **SUBRUSCO** REGD. QUALITY SHAVING BRUSHES
95, UPPER CLAPTON ROAD, LONDON, E.5.
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Cables: SUBRUSCO, LONDON

LA PARFUMERIE MODERNE
(Established 1908)
An Illustrated Monthly Review of the
Perfumery and Allied Industries
The regular publication (in English and Spanish as well as in French) of technical and practical articles on Essential Oils and Synthetic Perfumery Products is a feature of this popular Trade Journal.
Specimen copy and all particulars from
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NEW! CALVERTS "AIRFLOW" FLASK



Calvert's Tooth Powder in this new pack will be announced to the public in our Press and Radio advertising next week. Your Wholesale house stocks it.

- Attractive to show
- Simple to use
- Profitable to sell

Retail 1/- each

List Price 8/- per doz.

The familiar Round Tins (6d., 1/- and 1/6) will still continue to be supplied

F. C. CALVERT & Co. Ltd., MANCHESTER II

INECTO

*The Grey Hair
Recolourative*



8-Bottle Outfit
Wholesale 84/- doz.
Retail 12/6 each.



4-Bottle Outfit
Wholesale 48/- doz.
Retail 6/6 each.



2-Bottle Outfit
Wholesale 30/- doz.
Retail 3/6 each.

INECTO

ENQUIRY BUREAU : 27 DOVER
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Telephone: Regent 7541 (12 lines)



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TOOTH POWDER TOOTH PASTE
DENTURE POWDER

Bought on Display Terms yield

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SULPHONATED OLIVE AND CASTOR OILS

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PETAL DUST has enjoyed a steady sale for many years and never loses its appeal. It makes new customers daily. As a Moth Preventer it excels the smelly carbon type and is more attractive.

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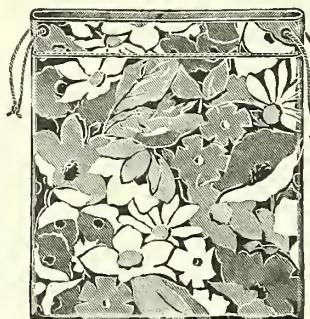
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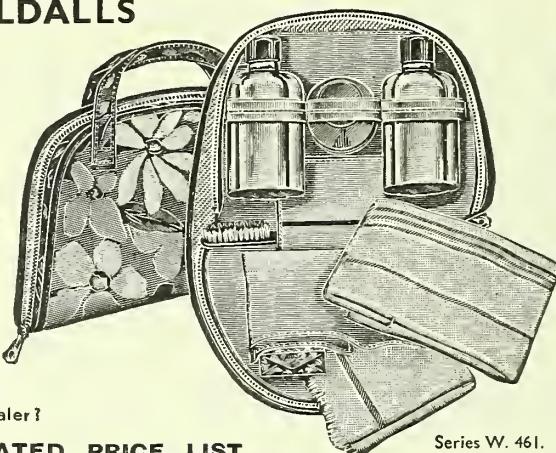
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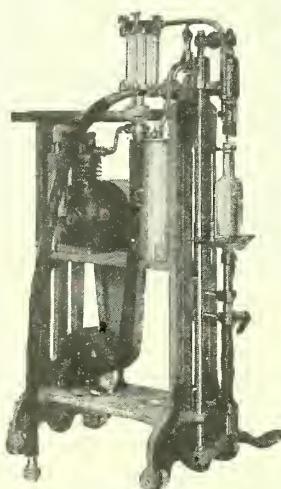
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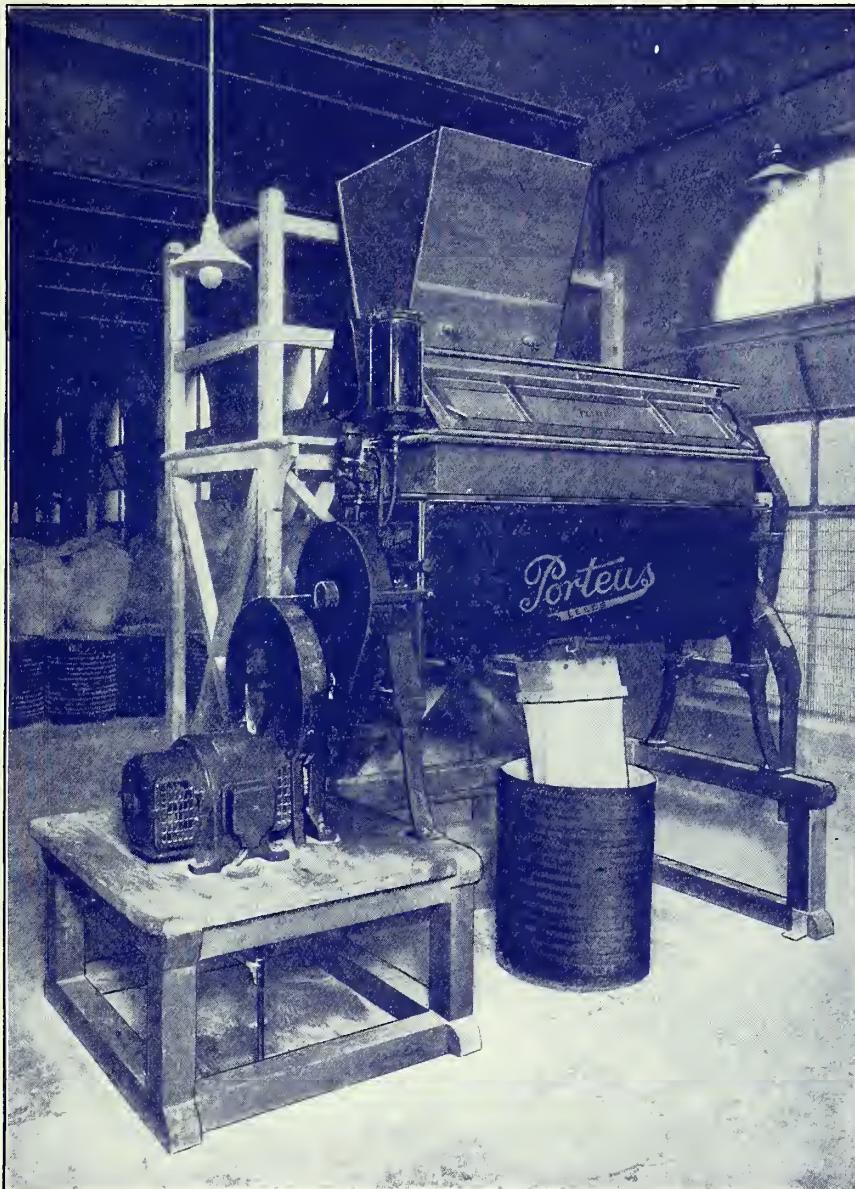
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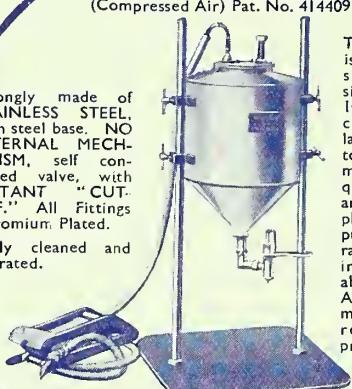
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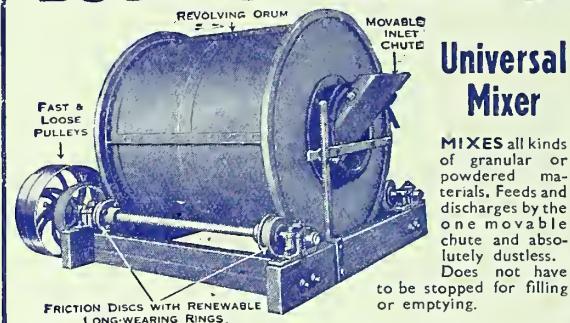
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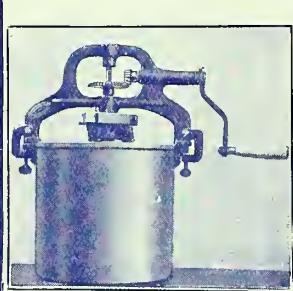
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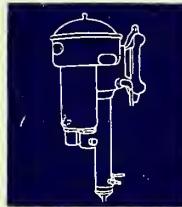
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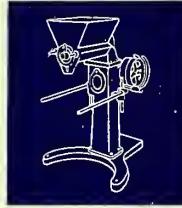
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NO. 4. STEAM STILL



"OO" ELECTRIC STILL



OSCILLATING GRANULATOR



GRANULATING MIXER

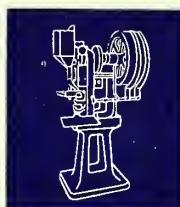


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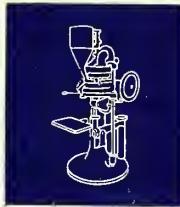
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MACHINES & WATER STILLS
ARE NOW KNOWN UNDER THE NAME
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OUR REGISTERED TRADE MARK



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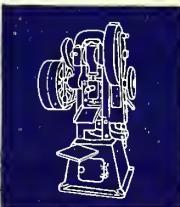
"F" TABLET MACHINE



"B" ROTARY MACHINE



"D" ROTARY MACHINE



MANESTY NO. 3 MACHINE



COPPER COATING PAN

TABLET-making Machinery is used today in an ever-increasing number of industries. The convenience of having certain materials compressed into tablets, balls, squares, cubes and other shapes appeals to various trades, so that now besides the vast quantities of medicinal tablets made, we have similar quantities of tablets and cubes for making Lemonade and other fruit drinks, tablets and blocks used in the Plastics industry, Naphthalene Balls, blocks of Laundry Blues and Creams, Bath Salt Tablets and Cubes and other commodities.

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THE PERFECT HAND EMULSOR!



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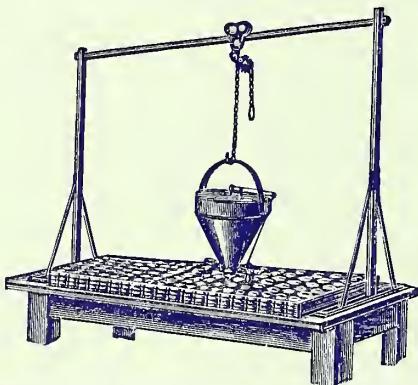
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PRODUCES 1 PINT OF EMULSION
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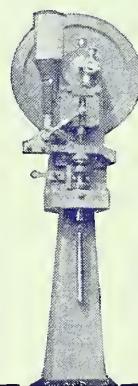
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Mixing machines for ointments, etc., for hand and power.
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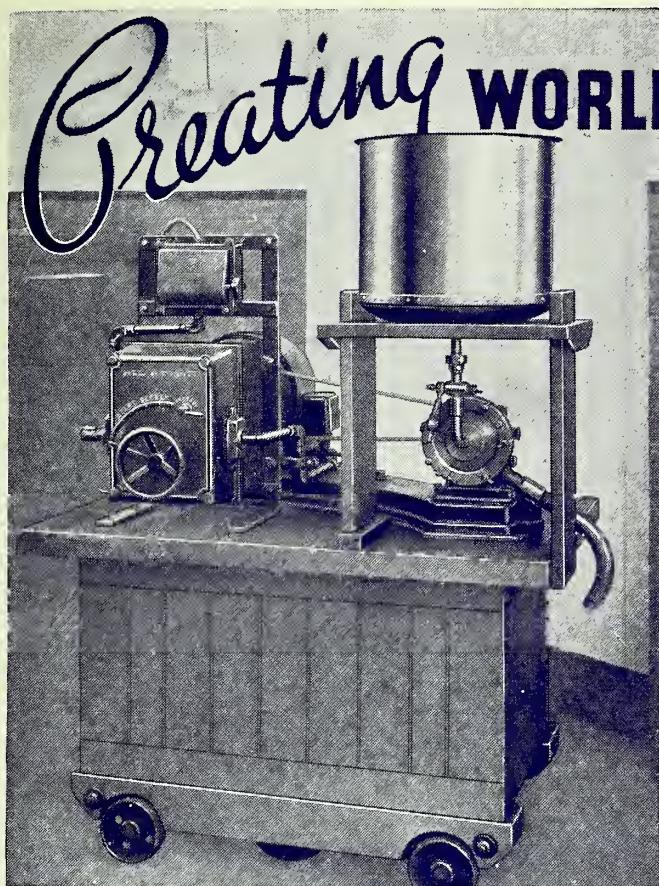
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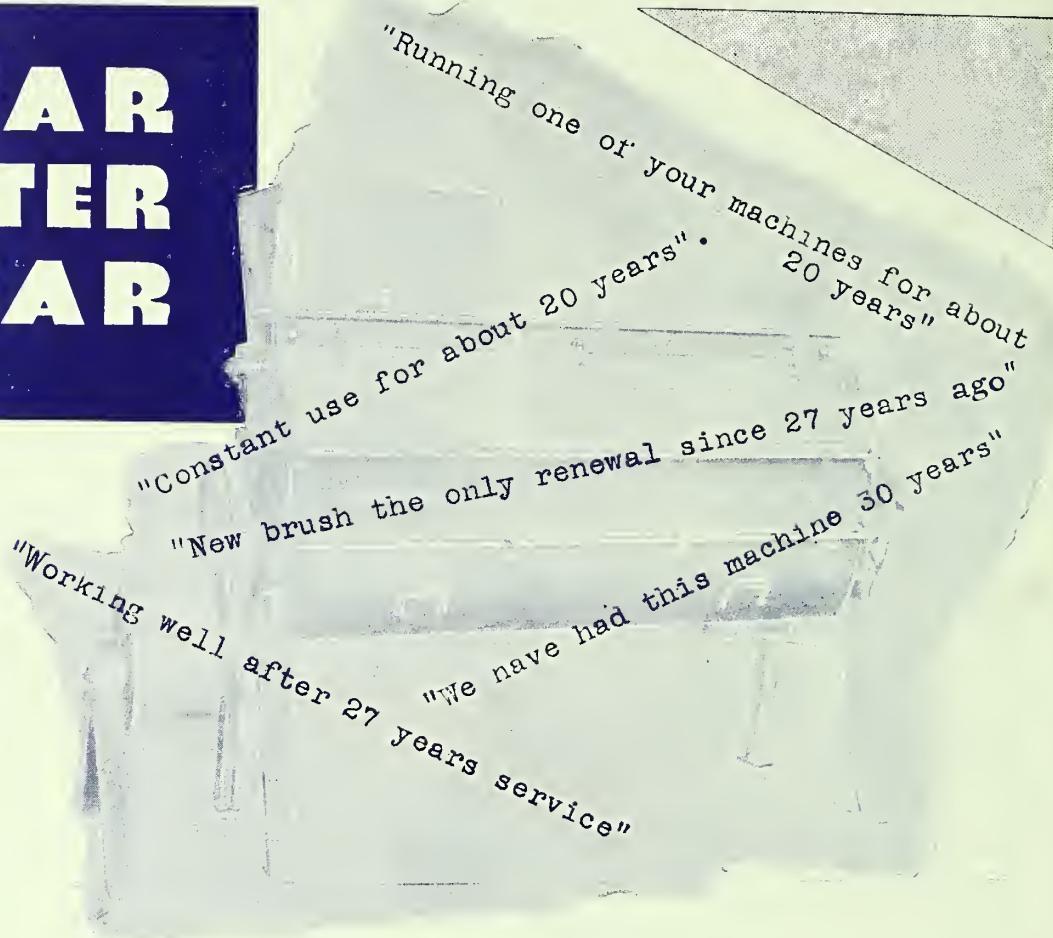
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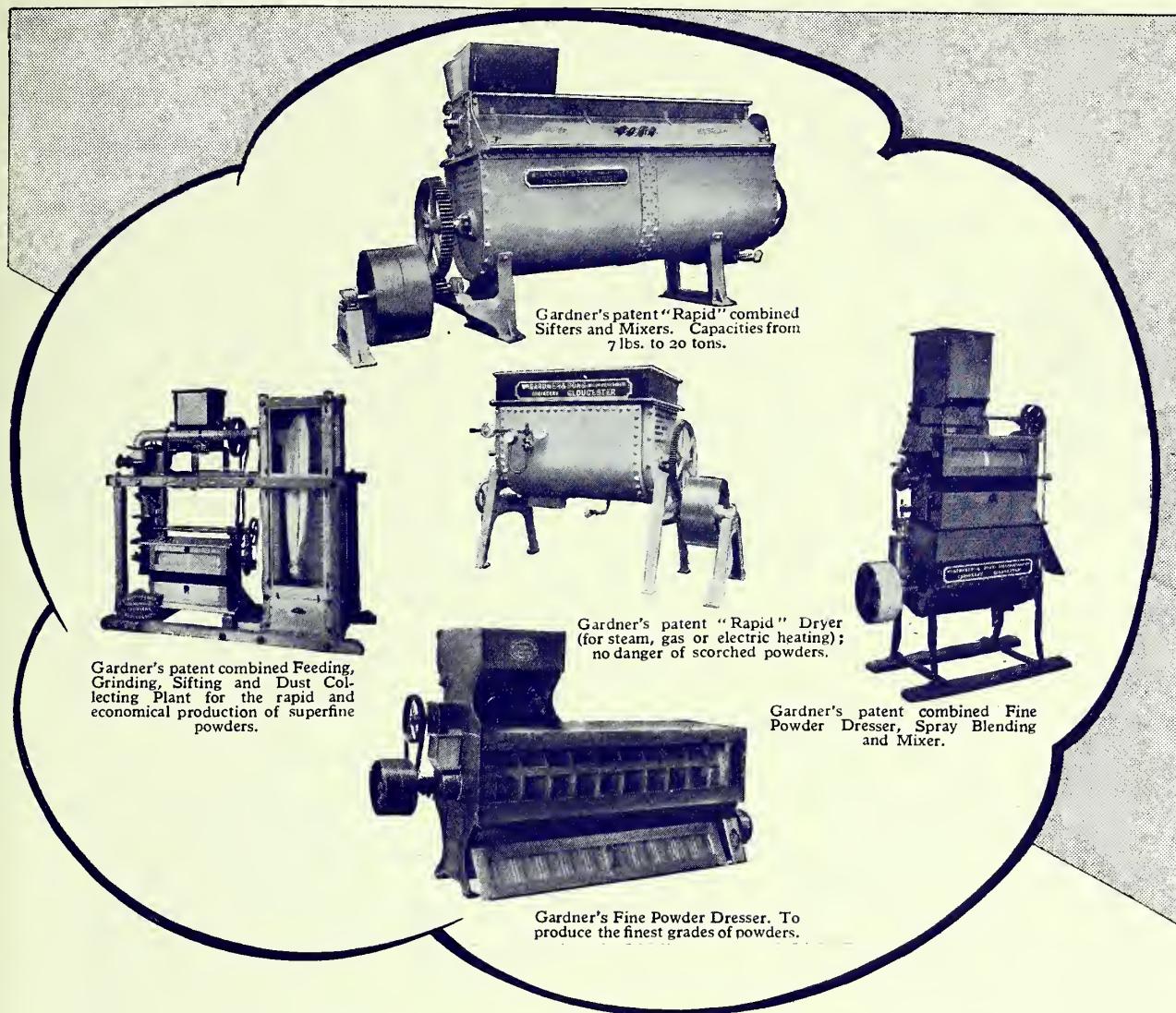
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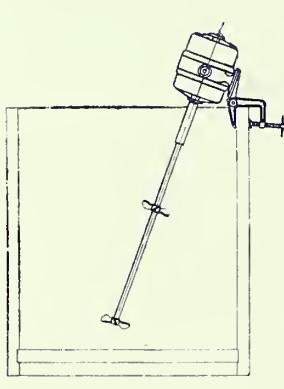


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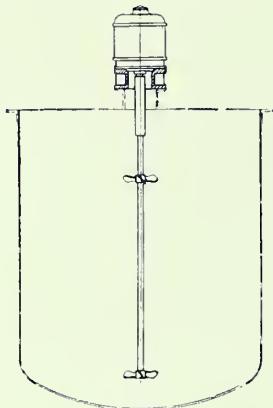
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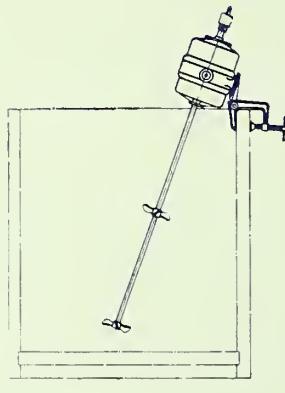
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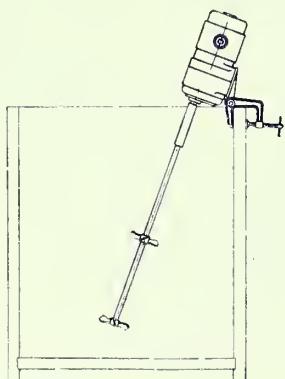
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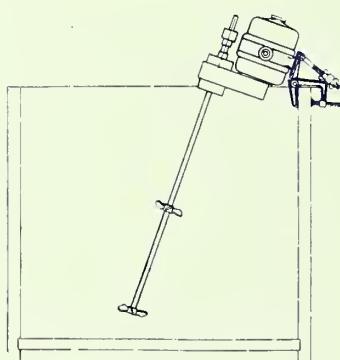
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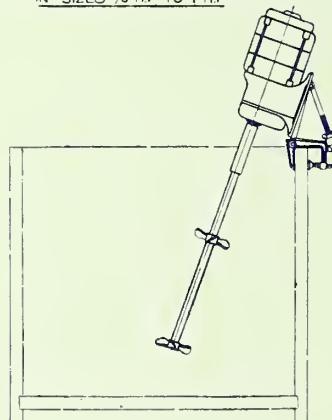
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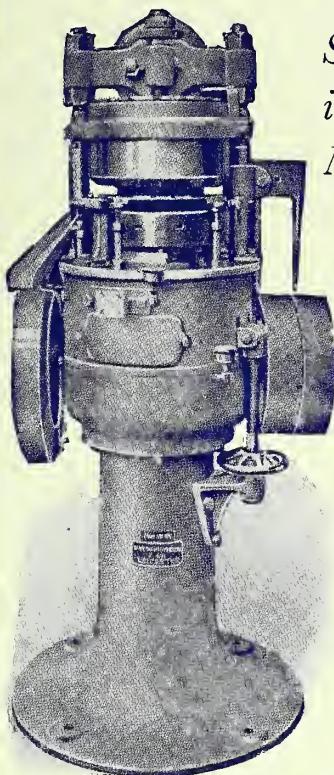
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*Single Punch Machines
in six sizes. Rotary
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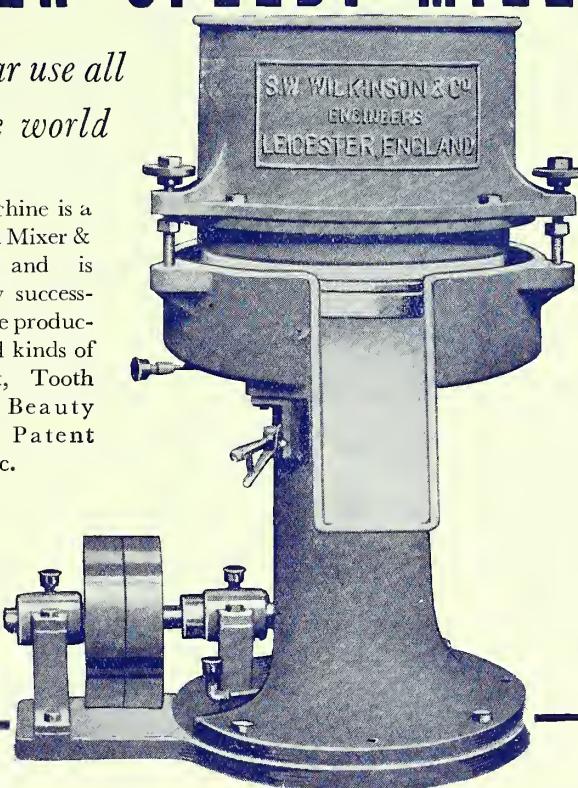
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Machines
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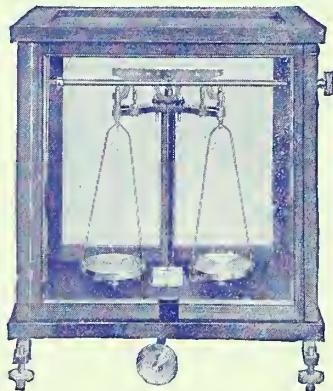
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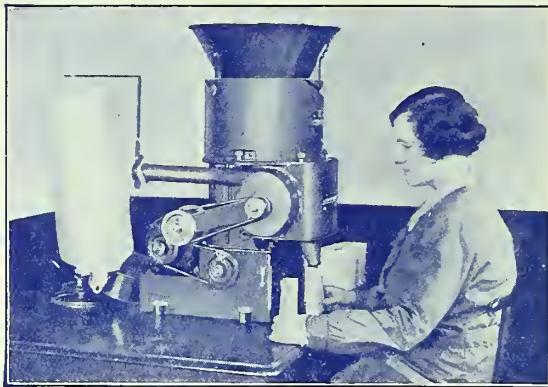
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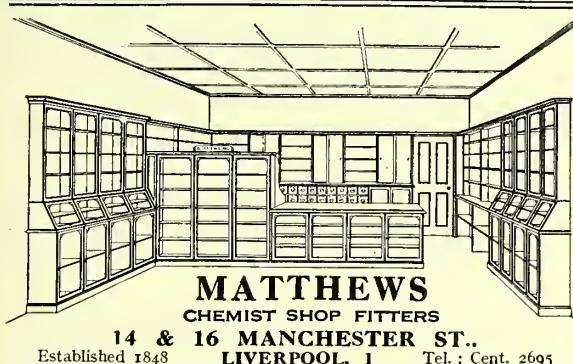
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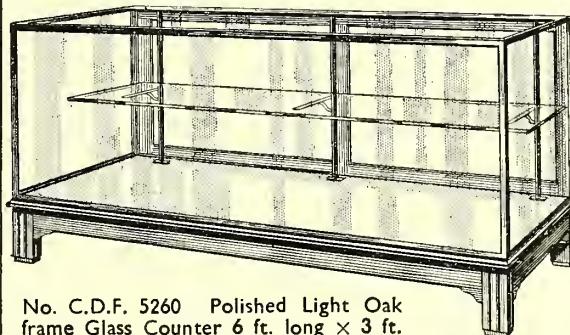
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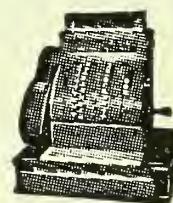
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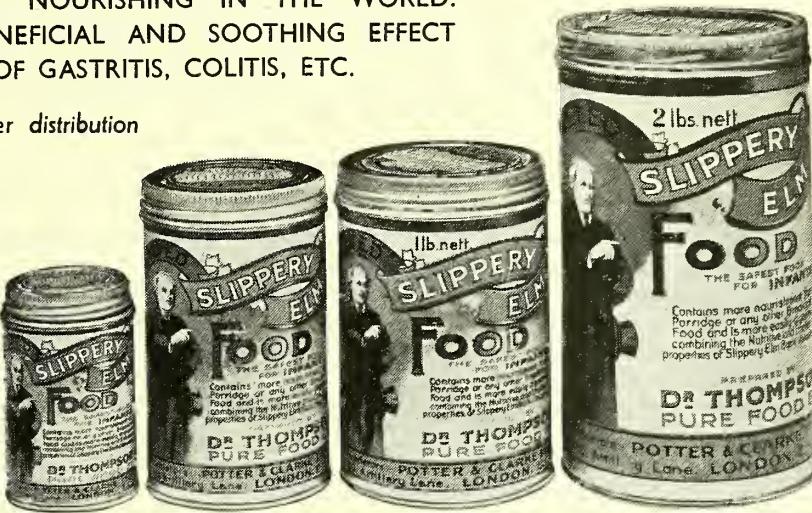
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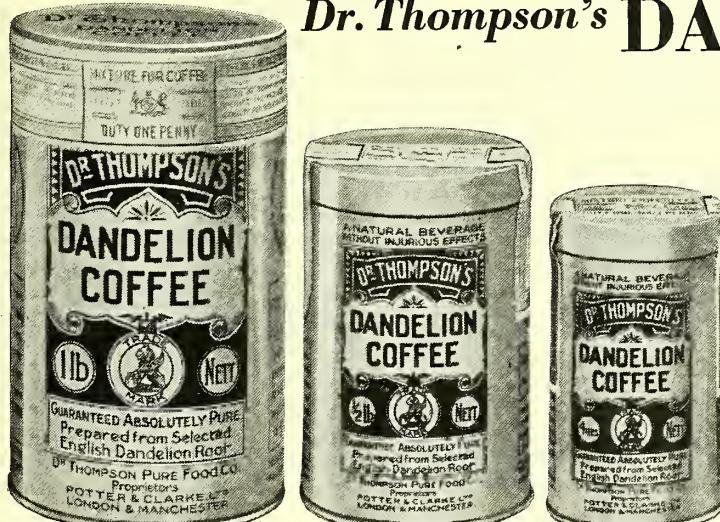
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News of the Week

Shops (Sunday Trading Restriction) Bill

On February 21 the Shops (Sunday Trading Restriction) Bill, introduced by Mr. Loftus and other private members, was read a second time in the House of Commons by 191 votes to eight. Mr. G. W. Lloyd, speaking for the Home Office, said the Government were in general sympathy with the principles underlying the Bill. Clauses 1 and 2 (1) are as follows:—

1. Every shop shall, save as otherwise provided by this Act, be closed for the serving of customers on Sunday.

2 (1). The provisions of the foregoing section shall not apply to any shop in which there is carried on a trade or business which is for the time being and as respects that shop excepted from the provisions of this Act:

Provided that, where there is carried on in the same shop any trade or business which is so excepted together with any other trade or business which is not so excepted, the exemption conferred by this section shall apply to the shop only so far as the carrying on of the trade or business so excepted is concerned, and subject to such conditions as may be prescribed.

Special arrangements are proposed for businesses managed by people of the Jewish religion, for hairdressers and for various other classes. Assistants employed for more than four hours on Sundays must receive a whole weekday holiday in addition to any weekly half-holiday to which they may be entitled under the Shops Acts; and those employed for not more than four hours on Sundays must correspondingly receive an additional weekday half-holiday. The fines for contravention are: First offence up to £5; second or subsequent offence up to £20. Among the trades and businesses exempted from the provisions of Section 1 are that of the sale of medicines and medical and surgical appliances. Orders for Sunday closing will be made by local authorities on certain conditions, one of which is the approval of not less than two-thirds of the occupiers of shops concerned. The Bill does not extend to Scotland or Northern Ireland.

British Standards Institution

The British Standards Institution has issued a British standard specification for distillation apparatus (No. 658, 1936). The first part of the specification describes in detail the component parts of the apparatus. The assembly of the apparatus is next dealt with, and diagrams show the assembly for each of four different types of condenser provided. An appendix is given dealing with the correction of barometric readings to standard conditions.

The Institution has also issued a British standard specification for Kohlrausch flasks. The specification provides for 50-mil, 100-mil and 200-mil flasks, and gives details of dimensions, construction and tolerances for each size. An appendix has also been added giving particulars for additional Kohlrausch flasks for beet sugar laboratories. The National Physical Laboratory has arranged to accept Kohlrusch flasks for examination for conformity with the British standard specification. Copies of this specification (No. 615, 1936) and of the specification for distillation apparatus may be obtained from the Publications Department, British Standards Institution, 28 Victoria Street, London, S.W.1, price 2s. 2d. each post free.

Pharmacy League

The annual meeting of the Pharmacy League was held at 17 Bloomsbury Square, London, W.C.1, on February 25, Mr. Hope Evans in the chair. The chairman said they had held a number of successful meetings. There were seven nominations for a committee of ten, so there were three vacant places for which he would ask for nominations. Later they would introduce a gentleman who would seek election to the Council. The treasurer read his report, showing a balance in hand of

£7 13s. 8d. The report was adopted. The general secretary reported on the work of the League, and said that the membership had increased. The Committee secretary said that Mr. J. E. Crowe, of Sheffield, had been selected by them as their candidate. They had a definite campaign which they were going to launch. They wanted to wake pharmacists up and get modern ideas into pharmacy, and Mr. Crowe was going to help them to do that. The chairman said that they had communicated with the Pharmaceutical Society asking that in future the inspectors under the Pharmacy and Poisons Act should be between thirty and forty years of age. They noticed now that in advertisements for inspectors the age was thirty-five to forty-five, which they considered was a point they had gained. Introducing Mr. Crowe, the chairman said it would be a hard fight for them to get Mr. Crowe elected, as they would be contesting the combined efforts of the retiring members.

Mr. Crowe said that his views might perhaps differ in some respects from theirs; but as long as they reached the desired goal, it did not matter how they got there. He had gone "right through the mill" to obtain his experience in pharmacy, and he was now a servant of a company. He considered a company pharmacy, properly managed, was a good thing. No dispensing should be done in hospitals except by a qualified man, and that should also apply to the Army and Navy. A pharmacist could not obtain officer's rank in the Army, which should be put right. They did not appear to have any indication at present as to what inspectors under the Pharmacy Acts were to do, and they should press for a standard. People up to £500 a year should be included in the National Health Insurance Acts. Before preparations were put on the market they should be inspected, and chemists should not be exploited. In the North children's foods and preparations of that kind were mostly supplied by welfare centres. He advocated closer co-operation between the League and the N.P.U. The hours in pharmacy were far too long. He considered that the Council needed a spring-clean, and the time had come when they should have younger men on the Council. His suggestion was that the Pharmaceutical Society should allow every candidate one free address to be sent out by them. If they had a man in Parliament they would have got much better terms over the new Bill. He would like to see the Society bring out a scheme for unemployment in addition to the national scheme.

In reply to questions, Mr. Crowe said that he and his company were supporting the Chemists' Friends scheme. He was definitely in favour of a minimum salary, but pointed out that there was the danger of the minimum becoming the maximum, which they would have to watch carefully. His intention was that if elected he would support the League, but at the same time in other matters he retained his individuality. He did not think the time would ever come when he would be told how to vote when on the Council. Asked whether he was satisfied with the present Charter of the Pharmaceutical Society, he replied that the N.P.U. came into being because the Pharmaceutical Society were apparently only concerned with educational matters. He thought the Society should take a much greater interest from the point of view of the individual pharmacist. In order to do this, they should, if necessary, extend their Charter. The general secretary said that the Charter had been thoroughly examined, and to get any alteration it would be necessary to scrap it. It was pointed out by a member that it had been decided in the Courts that the Society was limited in its activities and could not go into such matters as salaries. Mr. W. Atkinson said he had been impressed with Mr. Crowe, and pledged the support of the Association of Pharmaceutical Employees, which meant about 500 votes at the moment. Mr. Crowe was unanimously adopted as the League's candidate for the Council election in May.

Inquests

An inquest was held, on February 24, on the body of Mr. Maxwell Maybury, Southsea, a son of a medical practitioner. It was stated that he was found in a collapsed state suffering from what proved to be strychnine poisoning. The city analyst (Mr. R. P. Page, F.I.C.) stated that in the contents of the stomach he found nearly 1 gr. of strychnine. A verdict of "Suicide whilst temporarily insane" was returned.

A verdict of "Death from natural causes" was returned, on February 15, at an inquest on the body of Amy Shaw, Spencer Street, Accrington. The husband said his wife had consulted medical practitioners. Three months ago she saw Mr. F. Dewhurst, herbalist, Henry Street, Church, and appeared fairly well under his treatment. Mr. Dewhurst visited her and sup-

plied three bottles of medicine which seemed to do her good. Mr. Dewhurst said in serious cases he always advised a medical man. He prescribed valerian, gentian and peppermint. The police surgeon said the woman had heart trouble. There was nothing harmful in any of the ingredients given. The Coroner: Mrs. Shaw might as well have taken coloured water. Witness replied that he would not say that. The herbs would improve the system generally. The organic heart disease was incurable. The coroner said the woman was a free agent; Mr. Dewhurst had treated her to the best of his ability.

Staff Festivities

The Crookes Laboratories (British Colloids, Limited), held a social and dance in the Porchester Hall, Porchester Road, Bayswater, London, W.2, on February 17. Over 400 members of the executive, laboratory and factory staffs and their friends were present and enjoyed, in addition to the dancing, a variety show in which the artists were all members of the firm.

The sixth annual social of the staff and friends of Cheetham's Photographic Service, Louth, Lincs, was held at the Wilde Memorial Hall, on February 17. A party of sixty thoroughly enjoyed an old-fashioned supper. Dancing and games followed, and the company were entertained by humorous songs contributed by Mr. A. Somerville, and by a one-act play performed by six members of the staff.

The thirty-fourth annual social evening of the staff of C. J. Hewlett & Son, Ltd., took place on February 22 at the Abercorn Rooms, Bishopsgate, London, E.C.2. About 100 of the senior members of the staff were present, Mr. E. J. Millard (managing director) in the chair. The chairman referred to the recently enlarged aseptic laboratory, which had been fitted with the latest apparatus for the preparation and sterilising of hypodermic injections, for ampoule filling, etc. Mr. Vivian C. Hewlett proposed the toast of the committee responsible for the evening's arrangements. A popular entertainment followed, after which the remainder of the evening was devoted to dancing.

After-Dinner Speeches

The hope that the profession of pharmacy would soon be more closely allied to the medical profession than it is now was expressed by Dr. L. Lavine, speaking at the annual dinner-dance of the Hull Chemists' Association at Powolny's Restaurant, Hull, on February 20. The Pharmaceutical Society, he said, laid down a rigorous course of culture and science, and then chemists wasted their time "dishing out spools of films." "As a profession," Dr. Lavine added, "you have no greater admirers than doctors, and we always feel the greatest gratitude for the assistance you give us. In your Society you have the cream of the brains of the country." Mr. E. Saville Peck, replying, said pharmacy was at present passing through a crisis in the matter of poison law and



Standing (Left to right): Mr. H. Ringrose, Mrs. Ringrose, Mr. B. Foster, Dr. L. Lavine, Mrs. Lavine, Mr. E. Saville Peck, Mr. H. S. Smart (President Hull Chemists' Association), Miss E. Palmer, Mr. E. P. Bates, Mrs. Bates, Mr. A. R. Tankard, Mr. D. W. Robinson.

regulations. They wanted to know how far the Poisons Board had concurred in the modifications made. After a passing reference to the efforts being made to bring forward a new Pharmacy Bill, which would clearly define all the functions and qualifications of pharmacy, Mr. Peck concluded by ex-

pressing gratification at the fact that they had in Hull a Junior Pharmaceutical Association, which he learned was running very successfully. Mr. H. S. Smart (president of the Hull Chemists' Association), who was in the chair, gave the toast of "The Visitors," and Mr. A. R. Tankard (Hull City analyst), who replied, said a society such as theirs did a great deal for the public welfare. The diffusion of their experience on matters of general interest was very valuable. In the examinations of various drugs and medicines which he had to make in the Hull area he had found every item up to standard and of very satisfactory quality. Dinner was followed by a dance.

The ninth annual dinner of the Hastings and District Branch of the Pharmaceutical Society was held at the Queen's Hotel, Hastings, on February 19. Mr. E. W. Skyrme (chairman) presided over a company of about seventy. Replying to the toast of "The Pharmaceutical Society," Mr. Noble said the Council was disappointed with the decision of the Home Secretary with regard to the Poisons List and Rules. The fundamental principle of the Poisons List—that it was for the protection of the public—had been lost sight of. His action was a danger to the public and an injustice to pharmacists. About 200 attended a dance which followed the dinner. Dance prizes were presented by the Mayoress.

Among those present were Mr. C. A. Noble (member of Council) and Mrs. Noble; Mrs. Skyrme; the Mayor and Mayoress of Hastings (Councillor and Mrs. Ford); Dr. T. Reed (chairman of the local branch of the British Medical Association) and Mrs. Reed; Dr. G. and Mrs. Nesbitt Wood; Dr. and Mrs. Dunbar Johnson; Mr. H. C. Browne, Eastbourne, and Mrs. Browne; Mr. D. Foster, Brighton; Mr. G. S. Perrett, Bexhill; Miss C. K. Lynch (secretary); Miss M. G. Parris (assistant secretary).

Sessional Events

A meeting of the Anglesey, North Carnarvonshire and Colwyn Bay Branch of the Pharmaceutical Society was held at Conway on February 19, Mr. Llew. W. Jones in the chair. The secretary reported on the Wrexham meeting of the United Chemists of Wales, and a resolution in support of the candidature of Mr. G. Knox Mawer was passed. A local committee was formed to further this object. Delegates from the Branch to the British Pharmaceutical Conference were instructed to support the proposal for exemption of pharmacists from jury service, and to press for a system of representation on the Society's Council equitable to the needs of Wales. Mr. D. A. Bryan gave a report on the N.P.U. Conference, and the meeting decided to carry out the recommendations of the Conference regarding the Chemists' Friends scheme. Mr. Bryan was asked to act as visiting vigilance officer.

At a monthly general meeting of the Bolton and District Chemists' Association, held on February 20, Mr. Walmsley (James Woolley, Sons & Co., Ltd., Manchester) lectured on "Some Functions of the Chemist in a Pharmaceutical Works." Dealing with some aspects of the manufacture of tinctures and extracts, he explained some of the troubles they came up against and how they overcame them. Mr. E. N. Swift proposed a vote of thanks to the lecturer. The president (Mr. F. Brindle) referred to the passing of Mr. Blain, a prominent member of the Association, and members stood in silence to pay their respects.

A well-attended meeting of the Derby Branch of the National Pharmaceutical Union was held at the Cavendish Café, Derby, on February 12, Mr. J. Smith in the chair. The speaker, Mr. G. A. Mallinson, explained the scheme at some length, pointing out, "that in the last twenty years, the conditions of sale of proprietary medicines had completely changed. What would be the condition in another twenty years unless some steps were taken?" Discussion followed, and a unanimous vote of confidence in the scheme was passed.

A meeting of the Carlisle Branch of the National Pharmacists' Union was held at the County Hotel, Carlisle, recently. The members present were Misses Dalziel and Ferguson, Messrs. J. Sharp, A. Holmes, J. D. Hunter, E. Bowman, — Hewitson, G. Lightfoot, T. J. Harryman, E. R. R. Crowe T. M. Ridley and T. W. J. Beaty (secretary and treasurer). The chairman (Mr. J. Sharp) referred to the great loss sustained by the nation through the death of his late Majesty and expressed sympathy with the royal family in their bereavement. All present stood in silence as a tribute to the late Sovereign.

Brighton

The president of the Brighton and Hove Association of Pharmacy (Mr. Donald Foster) presided over a well-attended meeting of Brighton, Hove, Portslade and district chemists, called to discuss the Chemists' Friends scheme. The meeting was addressed by Mr. G. A. Mallinson (secretary of the National Pharmaceutical Union). Mr. Mallinson stated that the chemist was only asking for treatment which was fair and just; it was only right that the goods which had obtained a market through the good will and co-operation of the chemist should in return be restricted to him. Chemists wished to control branded pharmaceutical preparations and branded surgical goods, and over these goods, he contended, the chemist had a prescriptive right. Displays of goods by the chemist were of vast importance to manufacturers, who realised that the general public expected chemists to satisfy themselves of the quality of the goods sold by them. Mr. Mallinson was confident that pharmacy had not sunk so low that it was no longer possible for windows to be dressed without proprietary show-matter. Mr. Mallinson's speech was received with great enthusiasm, and at its conclusion the following resolution was unanimously passed:—"That at a meeting of chemists of Brighton, Hove, Portslade and district, held on February 10, 1936, it is agreed to adopt and to put into action the Chemists' Friends scheme as laid down by the N.P.U." It was also agreed that signatures be obtained from all chemists in Brighton, Hove, Portslade and district in support of this resolution.

Leeds

A general meeting of the Leeds Branch of the National Pharmaceutical Union was held on February 18, Mr. F. Midgley in the chair. Mr. Midgley gave his report of the N.P.U. Conference of Delegates, which he attended. The Chemists' Friends scheme was discussed at length, and it was decided to continue the discussion at the next meeting, when it was hoped that Mr. Gillegan, who should have spoken on the subject, would be present. A resolution supporting the scheme was carried unanimously.

At the February meeting of the Leeds and District Branch of the Pharmaceutical Society Mr. E. Wood (Wakefield), a member of the council of the Branch, read a paper entitled "Does Pharmacy Deserve Help?" Mr. J. F. Simon (chairman of the Branch), presided. Mr. Wood contended that despite all the tightening up of training and qualification, and the supposed benefits of the new Act, chemists are in a worse position than previously. Were it not for the fact that the public are becoming steadily more "drug conscious," he thought the situation for the average private chemist would be even worse. The newly qualified chemist had a much wider technical knowledge than men of the older school; but did this offer any greater surety of adequate employment and remuneration? The Pharmaceutical Society, by reason of its Charter limitations, could give little or no help in this direction, and the new Pharmacy and Poisons Act opened new avenues of trade competition from outside. Mr. Wood regarded the new Act as the worst blow pharmacy had had for years. The small general dealer was notorious for the manner in which, depending on the safety of personal knowledge of his comparatively small circle of regular customers, he blithely ignored all regulations in handing out loose poisons. One only needed to read the Press of the grocery and some other trades to see how pleased the other people were at their new rights under the Pharmacy and Poisons Act, and to realise what that meant for chemists. The manufacturers were quite unconcerned as to who sold their products so long as they got sold. Mr. Wood suggested that the Pharmaceutical Society could help to stop the "prostitution" of the name "chemist" by insisting that the word must not be displayed in an unqualified store, or by applying for legal power to set up a Council with disciplinary powers to prevent any member from acting in a manner liable to bring all pharmacy into disrepute. The company chemists recognised the value of the Chemists' Friends scheme and were ready to co-operate. The scheme had the great advantage of offering the chance of binding together classes of pharmacists who had tended to quarrel among themselves. The cause of much of the trouble lay with the private rather than the company chemists. The company shop opened at times regarded as necessary, but the private chemist was often open when it was quite unnecessary. It was for chemists to decide whether they were to go on muddling along or whether they were going to forget past differences with the company chemists and get

together for the one thing that could help them all—a united pharmacy.

Mr. N. H. Burns, in opening the discussion, said he agreed with much of what Mr. Wood had said, but not with his apparent suggestion that there was nobody to look after the business interests of retail chemists. The N.P.U. was doing that very well. Mr. Wood agreed that the N.P.U. was working very well, but it acted only for a part of the chemists, not the whole, and in any case it could not compel. There was need for some medium which could speak with full authority for all legitimate chemists. Mr. Heseltine suggested that the Pharmaceutical Society was already doing a good deal of the kind of thing mentioned by Mr. Wood. Mr. J. H. Gough said while it was true that the Society now represented every qualified chemist, whether private or company, and that it was keeping in close touch with the Home Secretary with a view to any amendment of the recent decision that might be secured, they were up against the blunt fact that the manufacturers were out to sell their products through any channel available. Mr. Harold Haw said he agreed with Mr. Wood as to the desirability of complete unity among chemists. Mr. Peters felt it was likely that they would find a good many things supposed to have been lost coming back to chemists, after experience showed the effects of the new latitude on public safety. Mr. Kemp said pharmacy was well worth helping if pharmacists were willing to help themselves. There ought to be much wider use of the rota system. He agreed with Mr. Peters as to the likelihood of chemists getting back some of the business they believed was at present being lost to others. Baby foods were a case in point. Mr. Wood was thanked for his address on the motion of Mr. E. Buckley.

Leicester

On February 20 Mr. A. R. Chamings (head of the Pharmacy Department, Leicester College of Technology) gave a lecture to members of the Scientific Society of the Wyggeston Grammar School on "Digitalis and its Preparations."

The Department of Pharmacy of Leicester College of Technology held their first annual reunion at the Grand Hotel on February 12. The function, which took the form of a supper and dance, was well organised by Mr. C. Gunn and Miss L. A. Kay, members of the staff of the Department. The company, numbering more than 200, included present and past students of the department; pharmacists of the city and county; several members of the staff of the College; the principals and registrar of the Colleges of Technology and Art (Messrs. L. W. Kershaw,



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K. Holmes and F. M. Drewery); the chairman and vice-chairman of the College Committee (Mr. Councillor C. R. Keene and Mr. W. Oram, J.P.); Mr. P. C. G. Stiles (president of the Leicester and Leicestershire Branch of the Pharmaceutical Society); Mr. A. E. Young; Mr. S. S. Squires (who acted as M.C.); and Mr. A. R. G. Chamings (head of the Department). Among the guests present were Mr. T. J. Cox (territorial general manager of Boots, Ltd.); Dr. E. W. Goodwin; Mr. A. Lochhead (manager of the Leicester City Football Club); Mr. F. Bullock (city analyst). Supper was served in the Queen's Hall at 10 o'clock, and a convivial atmosphere prevailed under the chairmanship of Mr. Gunn, who spoke humorously of the inauguration of this new—it was hoped annual—function of the Department of Pharmacy. Students from all over the country, and even one from China, had expressed their regret at being unable to be present. The toasts were preceded by a pageant of years, representatives speaking briefly on behalf of the seventeen years since 1920. The speakers, introduced with a fanfare of trumpets by the band, were headed by a bearded representative of 1966, who came over with "William the Conqueror," Mr. D. G. Hackett then referring to the invasion into the College of the new language known as the vernacular. Mr. A. E. Young proposed the toast of "Visitors and Old Lags," the latter being those who had spent "twelve months' hard" in the pharmacy department and were now set free, a menace to an unsuspecting world. Mr. T. J. Cox replied for the visitors and Mr. C. Jacobs for the "old lags." Donors of prizes were:—Messrs. Kay; A. Mason; J. Smith; A. de St. Dalmas & Co., Ltd.; E. H. Butler & Son, Ltd.; Wands, Ltd.; J. Young & Sons, Ltd.

Liverpool

John Thompson (Wholesale Druggists 1921), Ltd., have demolished several old warehouses adjoining their premises in Duke Street, Liverpool, and are erecting on the site a new four-storey factory and laboratories with up-to-date equipment.

"Modern Medical Treatment in a Mental Hospital" was the subject of an address to members of the Liverpool branch of the Guild of Public Pharmacists at Liverpool, on February 19, by Mr. W. L. Nixon (chairman of the Branch), pharmacist at the Mental Hospital, Rainhill.

London

At the February London Sessions a plea of "Guilty" was made by two brothers, the elder of whom was sentenced to nine months' imprisonment, in respect of a burglary at the shop of Mr. F. G. Wells, chemist and druggist, Streatham High Road, S.W., in January. The younger one will be dealt with at the next Sessions.

The monthly meeting of the South-West London Chemists' Association was held on February 14, when the speaker was Mr. A. J. Fairlee, one of the oldest members of the Association. In an instructive and at times humorous manner he gave a brief history of pharmacy through ages. He also dealt in detail with a number of exhibits comprising bottles, jars, civet horns, musk caddies, etc. After replying to the discussion a hearty vote of thanks was accorded on the proposition of Mr. Shakerley.

A meeting of the Guild of Public Pharmacists was held at 17 Bloomsbury Square, London, W.C.1, on February 19, the president (Mr. C. H. Sykes) in the chair. A family bereavement prevented Dr. R. F. Corran from lecturing. Mr. Rymill, B.Sc. (Evans Biological Institute), gave a lecture entitled "The Anæmias and Liver Therapy." Mr. Rymill outlined the causes and various types of anæmia, devoting most of the time to pernicious anæmia, both megalocytic and microcytic, describing the success of liver extract and hog's stomach tissue in combating the disease. A discussion followed in which Miss Edmond, Miss Harvey, and Messrs. H. Berry, H. Davies, and others took part.

At the Central Criminal Court, on February 21, Mr. Justice Atkinson and a jury concluded the hearing of the case (which lasted for nine days) against Messrs. Garabed Bishirian, produce broker, Park Lane, W.1; John H. C. E. Howeson, director, Bexley; and Louis Hardy, director, Bexley, who were accused of offences arising out of the recent pepper trade crisis (C. & D., February 15, p. 174). All were found "Guilty." The two first defendants were each sentenced to twelve months' imprisonment in the second division, and the third to nine

months'. Applications were made in the Court of Criminal Appeal, on February 24, for bail for Howeson and Hardy, pending appeal; the applications were refused.

A party from the London College of Pharmacy spent their mid-term holiday at Olten, Switzerland. A football match was played against F.C. Olten, one of the clubs in the first division of the Swiss League, the visitors being defeated by 7-0. Olten played magnificent football, but in fairness to the students it should be stated that they were handicapped by a very hard ground and an injury to their centre-half in the first minute of the game. In addition, the match was played only a few hours after arrival. After the game a reception was held in the clubroom and later a dance in honour of the visitors was held in the Hotel Aarhof. On the following day the party were taken in cars on a 250-mile tour to Lucerne, the Brunig Pass, Interlaken, Grindelwald and Berne. During their stay visits were paid to the Sunlight soap factory at Olten and to the printing works of Otto Walter. On subsequent days the tourists visited Altdorf, Brunnen, Zurich and the famous winter-sports resort of Engelberg. Here an ascent was made to Trubsee by cable railway and a descent from Gerschni Alp by luge along the bobsleigh run used for world-championship contests. Everywhere the party met with magnificent hospitality. The Olten football club presented a large wooden bear to their guests in memory of their visit, while the London College gave their Swiss hosts a silver statuette of a footballer. The party, which numbered thirty, included the principal (Mr. I. G. Rankin) and Mrs. Rankin. The visit was organised by Mr. Rankin and Mr. V. P. Gelli (secretary of the football club), through Mr. Schmid-Parker of the "National Zeitung" of Switzerland, to whom the entire party express thanks.

Newcastle-upon-Tyne

The February meeting of the Newcastle, District and Northumberland Branch of the Pharmaceutical Society of Great Britain was held recently at the County Hotel, Newcastle. A large company of pharmacists and students listened to a lecture (illustrated by lantern slides) given by Mr. R. J. Heslop, M.P.S., on "Photo-Micrography". Mr. Heslop spoke of the most suitable technique to be adopted for objects of vegetable, animal or mineral origin, and claimed that useful and interesting work could be done without costly apparatus. He illustrated how apparatus could be improvised or adapted. Questions were asked and answered.

Scarborough

The members of the Scarborough and District Branch of the Pharmaceutical Society held their annual whist drive and dance at the Grand Hotel, Scarborough, on February 5, when over 120 guests were present. Mr. A. W. Rawling presided over the whist drive, and prizes were presented by Mrs. J. C. Ireland. Dancing was interrupted for a cabaret turn by Miss Madeline Rossiter. The M.C. was Mr. Stanley Devonshire. The committee is grateful to the following for providing prizes: Ayrton, Saunders & Co., Ltd.; T. F. Bristow & Co., Ltd.; Brook, Parker & Co., Ltd.; W. B. Cartwright & Sons, Ltd.; Evans Sons Lescher & Webb, Ltd.; J. Grossmith & Son, Ltd.; Kodak, Ltd.; Lofthouse & Saltmer, Ltd.; S. Maw, Son & Sons, Ltd.; Reckitt & Sons, Ltd.; Wigglesworth, Ltd.

Miscellaneous

THE IDEAL HOME EXHIBITION, organised by the "Daily Mail," opens at Olympia, London, W.14, on March 24.

THEFT.—The premises of Macarthy's, Ltd., Market Place, Romford, were broken into on February 6. A sum of money and some fountain pens were stolen.

WINDOW-DRESSING AWARD.—In the recent window-dressing competition organised by Lytham Chamber of Trade the premier Dawson cup was won by Boots, Ltd.

PHARMACY AND POISONS ACT.—West Ham Town Council's public health committee has decided to prepare a list of persons occupying premises in West Ham who are entitled to sell poisons included in Part II of the Act. The duties of inspection and other administrative work are to be carried out under the general direction of Dr. Collins, medical officer of health, and Mr. E. F. Hughes, food and drugs inspector, is to be the inspector under Section 25 of the Act.

Irish Notes

Chemists' and Druggists' Society

A meeting of the General Committee of the Chemists' and Druggists' Society of Ireland was held on February 20 in the Society's rooms, 11 Waring Street, Belfast, the president (Mr. Fred Storey) in the chair. It was decided to send a letter of sympathy to Mr. A. M. Dougan on the death of his wife. Mrs. Harris wrote acknowledging the Society's letter of sympathy on the death of Major G. A. Harris, D.S.O., Permanent Secretary to the Ministry of Home Affairs. It was decided to have a debate with the Alembic Society on poison law on March 31.

North Leinster Drug Association

Mr. J. Burke, M.P.S.I., presided at a meeting of the North Leinster Drug Association held recently at Clones, when there was a representative attendance of chemists from Ballyconnell, Cavan, Clones, Rush, Belturbet, Ballinagh and other areas. Mr. Brendan Smith, organiser of the Irish Drug Association, was in attendance. The area covered by the North Leinster Association was discussed; one chemist present stated he had to travel seventy miles to attend the meeting. Mr. Nicholson (Clones) proposed, and Mr. Duffy (Belfast) seconded, that a sub-area for Cavan and Monaghan be established, and this was agreed to. Mr. Nicholson was appointed *Secretary* and with Mr. Burke and Mr. Duffy constitutes the *Committee*. Mr. Nicholson proposed that the I.D.A. should consider electing members for a probationary period before election as permanent members. Such a course, he said, would be beneficial, and in no way harmful to the I.D.A. The motion was passed. A resolution was adopted and sent to the I.D.A. urging that a definite number of committee places should be allotted to country areas or local associations, and that such country representatives should have full voting powers, the question of travelling and other expenses being left to each local association; under the present position delegates attend from local associations at the I.D.A.'s expense, without voting powers.

Brevities

During the early part of the week customs officers visited some pharmacies in Dublin and carried out searches. It is understood that goods which it is illegal to import or sell in the Free State were seized in a few of the premises.

The Committee of the I.D.A. at its meeting of February 24 urged its members to take advantage of the recent Warble Fly Order made by the Department of Agriculture for the Free State, by carrying full stocks of the preparations required.

A mass meeting of the members of the Chemists' Branch of the Irish Union of Distributive Workers and Clerks will be held in Dublin, on March 1, to consider the recent offer put forward by the Irish Drug Association in response to the demand for increased wages and shorter hours of working.

In the Northern Ireland Parliament, on February 20, the Parliamentary Secretary of the Ministry of Labour (Mr. Gordon) moved a supplementary estimate for £3,000. He said the deficiency arose first from the fact that the restoration of the remainder of the cuts to the doctors and chemists as from July 1, 1935, representing £7,100; and then there was the reduction in the amount to be deducted from the capitation fees of the dispensary medical officers following legislation passed since the framing of the estimates, which represented £600, and miscellaneous representing £213, making a total deficiency of £7,913. From other sources they had had savings representing £4,913. The estimate was passed.

Belfast

A pharmacy has been opened at Beersbridge Road, Belfast, under the style of Moffett & Anderson. The proprietors are Messrs. W. J. Moffett and Samuel Anderson.

At Belfast Commission, on February 20, Thomas Moore was charged with obtaining £1 by false pretences from Mr. Thomas H. Giff, Ph.C., Woodvale Road, and other firms. The prosecution alleged that the accused pretended he was authorised to solicit advertisements for insertion for a calendar to be issued in connection with a certain church, but there was no such calendar. The prisoner was found guilty on all the counts, and was put back pending trial on another charge.

Scottish Notes

Scottish Pharmaceutical Federation

A meeting of the Executive Council of the Scottish Pharmaceutical Federation was held in Edinburgh recently, Mr. P. M. Duff (president) in the chair. Ten applications for membership were passed. Among other matters, the following were under consideration:—Reports were given of several test prescription cases against members, including an appeal to the Department of Health for Scotland on behalf of Cummings Brothers, Dundee, against a decision of Dundee Burgh Insurance Committee (*C. & D.*, January 4, p. 3). It was mentioned that a full copy of the Tribunal's finding and note had been sent to every chemist in Scotland. The following indemnity claims were reported:—(1) Against a member by a doctor who went behind the chemist's counter and burned his jacket by it coming into contact with a gas jet. Claim against the member dropped. (2) Against a member by a lady who alleged that she became ill after taking a mixture containing potassium bromide and simple syrup, which she alleged contained certain foreign bodies. On the mixture being analysed, it was decided to repudiate the claim and defend any action, if necessary.

After due consideration, the Executive Council approved the principle of having a Chemists' Friends scheme for Scotland, and it was remitted to the General Purposes Committee to draw up a scheme for the consideration of the Executive Council. The present position with regard to the Poisons List and Rules was discussed, and it was remitted to the Parliamentary and Law Committee to watch matters carefully. Following a member's complaint of two co-operative societies granting dividend on sales of P.A.T.A. articles, it was reported that as a result of the Federation taking the matter up with the P.A.T.A., the two societies concerned had been placed on the stop list. A member had complained against a company for refusing to accept and give credit for goods returned, stating that the company's representative had offered the goods on "sale or return" terms. The secretary reported that there were printed on the back of the order form signed by the member the words "Conditions of Sale" and "There is no understanding, verbal or otherwise, affecting this order, except that which is written or printed on same," that there were no

words on the order form or on the invoice or other writing to the effect that the goods were on "sale or return" terms; and that the member had been advised to pay the balance of £2 claimed by the company. In another similar case the secretary had advised the member that the statement on the invoice indicated that if the goods were not sold within sixty days, credit would be given if they were returned to the company at the end of that period, and that in the circumstances he should accept the proposed arrangement put forward by the company to pay now for the goods sold by him and to pay for the balance of the goods within sixty days from January 20. A memorandum on "Irregular and Unfair Trading," to which sixteen national trade organisations and the Federation are signatories, was sent to all local pharmaceutical associations in Scotland asking them to take steps to deal with any of the cases referred to in the memorandum.

Brevities

Cockburn & Co., Ltd., manufacturing chemists, Howard Street, Glasgow, have recently put on the road delivery vans conveying a message on behalf of retail chemists. The wording, which occupies half of each side of every van, is: "Buy medicines and toilet goods from chemists only—they understand them." The vans are attractively painted in bright colours.

On the occasion of the annual whist drive, supper and dance of the Aberdeen Pharmaceutical Association at the Palais de Danse, Aberdeen, Mr. J. G. Mutch (president) occupied the chair at supper before a company of about 200. It was, he said, the largest gathering of Aberdeen chemists, their wives, relatives, sweethearts and friends he had seen on such an occasion. He paid tribute to the committee, particularly Mr. John Simpson (chairman), and Messrs Milne and Forsyth, who had been responsible for such an enthusiastic response from chemists and their friends. Whist prize-winners were:—*Ladies*, 1 Mrs. Mackie, 2 Mrs. F. W. Forbes, 3 Mr. Johnston; consolation, Mrs. P. Craighead, junior. *Gentlemen*, 1 R. Johnston, 2 I. Howie, 3 E. Thorpe; consolation, E. Cowie. Mrs. Mutch presented the prizes and dancing continued to a late hour.

Topical Reflections

By Xrayser

I Share Your Opinion

of the British Industries Fair expressed in your editorial article on p. 217; my own reactions were similar to yours as I wandered through the section devoted to the chemical industry. There was a lack of unity about it that was very conspicuous, especially when one compared the section with others that appeared to have been devised on more conspicuous lines. I gained the impression that although, in many sections, orders to big values had been booked, the displays in the chemical section must be regarded from the propaganda or advertising standpoint rather than that of sales. It is, as you intimate, a pity that a more comprehensive arrangement of the chemical trade with those connected with it, although not necessarily subsidiary to it, could not be devised. Pharmacy, as such, should be better represented; British-made sundries to a greater extent; perfumery and toilet goods could have a finer show. I take it that lack of space is an initial obstacle, combined with the difficulty of finding some body to be responsible for the planning and organisation of such a scheme.

The Dinner and Presentation

to Mr. J. Rutherford Hill (p. 210) is an event of outstanding importance in the annals of Scottish pharmacy. I learn that Mr. Hill has been associated with pharmacy for sixty-six years and has been qualified for over fifty-seven years. Such a record, combined with the arduous work for his calling he has accomplished during his fifty years as resident secretary in Scotland of the Pharmaceutical Society of Great Britain, is unique; I add my congratulations to those so eloquently expressed by Dr. Tocher, Mr. Peck, Mr. Linstead, and Mr. Gilmour. Pharmacy has no great prizes to bestow on those who serve her well, except the satisfaction of work

performed conscientiously and service given, sometimes to the point of sacrifice. One speaker said that Mr. Hill might have filled with distinction—may I add, with profit?—much more exalted posts in other sections of life. That, having found his job, he stuck to it and made it an outstanding success is perhaps the best compliment we can pay him.

I Agree

with "Olderun" (p. 199) in commenting upon the remarks of a speaker at Manchester who said that the pharmaceutical student of to-day preferred to dwell upon realities rather than Utopias. Pharmaceutical Utopias have led on pharmacists for very many years; they are no nearer to realities to-day than they have ever been—they are probably farther away. I can visualise a "true pharmaceutical profession ranking with other university graduates," but I cannot for the life of me see much money in it for those who practise it. It is well to face "realities" of another type than that meant by the speaker at the meeting, namely, that if pharmacy were carried on as a profession the number of people successfully practising it would be a small percentage of those on the Register to-day. Few towns with a population below 10,000 could support an "ethical" pharmacy at the present time; it is a matter for speculation, then, whether the owner of such could earn a decent income. Our leaders must be aware of such a state of affairs, and yet they go on merrily raising the standard of our examinations and training the embryo pharmacist to do work which 90 per cent. of those who qualify may never get the opportunity of doing again once they have left the training college. If the situation were not so serious one could regard it as mirth-provoking; I can only hope that some day we may get leaders who will be far-seeing enough to deal with it forcefully and drastically.

Legal Reports

Unsuccessful Action.—In the King's Bench Division of the High Court, London, on February 20, Mr. Justice Macnaghten heard an action for damages for alleged libel brought by Osborne, Garrett & Co., Ltd., Frith Street, London, W.1, proprietors of the "Hairdressers' Weekly Journal." The defendants were the Hairdressing Press, Ltd., Clement's Inn, W.C.2, and Mr. Gordon Fathers, a director of the company, of Emperor's Gate, S.W.7, proprietors of "The Hairdresser and Beauty Trade." The plaintiffs claimed damages for alleged libels contained in two circular letters, published by the defendants to advertisers in the hairdressing trade, and dated, respectively, September 3 and September 20, 1934. An injunction was also claimed restraining the defendants, their servants and agents from repeating the alleged libels or publishing any other matter defamatory to the plaintiffs. The defence was an admission of the publication of the letters, but it was maintained they were not of or concerning the plaintiffs; further, that the words did not bear any defamatory meaning and the occasion on which the words were published was privileged. At the conclusion of the evidence for the plaintiffs, Mr. Maxwell Fyfe, K.C., for the defendants, submitted that the words in the circulars did not bear the meaning alleged by the plaintiffs. His lordship upheld this submission, and judgment was accordingly entered for the defendants, with costs.

Merchandise Marks Acts.—At East Ham Police Court, on February 20, Henry Miller, Burges Road, was summoned for having in his possession for sale on January 27 certain goods to which were applied words calculated to lead people to believe that the goods were the manufacture and merchandise of the Vick Chemical Co., whereas the goods were not manufactured by that company. Mr. Derek Curtis Bennett, who appeared for the company, said that on January 27 men were seen by the police going from door to door in East Ham offering articles for sale. From the labels on the bottles it was quite clear that they were holding out that the goods were exactly the same as the Vick Brand Vapour Rub made by the Vick Chemical Co. The men, having no pedlars' licences, were arrested; but Miller had such a licence. The Vick Chemical Co. was American, and during the last twelve years their goods had been sold in England. On February 10 Detective-Inspector Taylor and other officers went with a search warrant to the defendant's house, where they found bottles containing vapour rub made up in such a way as to lead people to believe that they contained the article manufactured by the Vick Chemical Co. There was also apparatus. Mr. A. W. Duthie, for the defendant, entered a plea of "Guilty," and said he sympathised with the desire of the Vick Co. to protect themselves. The genuine vapour rub was called Vick Brand Vapour Rub, but the defendant called his "Vick's Vapour Rub" and it was made up in different coloured cellophane, while the genuine article was sold in cartons. When men went to doors they first proffered a carton of soap as an inducement, by way of a free gift, for the sale of the vapour rub. If the men were asked if it was the same as the genuine Vick Brand Vapour Rub, they would say it was not. The defendant now appreciated he had done a very foolish thing, and he had done all he could to help the police. He would give an undertaking, of course, not to repeat the offence. The magistrate said the case was of the greatest possible importance to the business world. There was no doubt that the article offered for sale was more than a colourable representation of the Vick Co.'s goods, but the company only wanted to put a stop to these sales. Therefore he would not send the defendant to gaol, but would fine him the maximum penalty of £20. On the application of Mr. Curtis Bennett, his worship allowed £15 15s. costs and ordered the goods seized to be forfeited.

Claim for Injunction.—In the Chancery Division of the High Court, London, on February 20, 21 and 24, an action brought by Gillette Industries, Ltd., City Road, E.C., against Mr. Sidney Levy, Leather Lane, E.C., described as "a chemist, perfumer and sundriesman," was heard by Mr. Justice Luxmoore. Mr. Norman Birkett, K.C., and Mr. Gerald Upjohn appeared for the plaintiffs, and Mr. Cartwright Sharp, K.C., and Mr. Lionel F. Heald were for the defendant. Mr. Birkett stated that the plaintiffs were claiming an injunction to restrain the defendant from selling the plaintiffs' goods, which

bore their trade marks, either wholesale or retail, at prices other than those fixed by the plaintiffs by their current price list. They also claimed damages. The plaintiffs were the well-known manufacturers of razors and razor blades. The defendant had a chemists' sundriesman shop in Leather Lane and also a stall in the Leather Lane market, where he carried on business under the style of "Sid's Stores." In his defence Mr. Levy asserted it was an implied term of the undertaking that the plaintiffs should take steps to maintain prices in the neighbourhood and to stop price cutting. Mr. Levy said that in breach of their agreement the plaintiffs had failed to take any effective steps to do so. Further, Mr. Levy alleged that he was induced to sign the undertaking by representations made to him that the plaintiffs had the power to stop price cutting and would do so. He counterclaimed for a declaration that he was no longer bound by the undertaking. Mr. Cartwright Sharp applied for leave to amend the defence by pleading further, or in the alternative, that Mr. Levy signed the undertaking on the faith of a warranty by the plaintiffs that their patents were valid, that the plaintiffs had power to stop price cutting, and that they would stop traders in the neighbourhood selling at cut prices. Mr. Sharp said he would call evidence to show that the plaintiffs' threat of proceedings for alleged infringement of their patents was mere bluff. His lordship said he was not going to deal with any question as to the validity of the Gillette patents in this action. Mr. H. J. Blackshaw said that he was a traveller in the employ of the plaintiffs, and on June 7, 1933, bought a packet of Seven o'Clock blades from Mr. Levy at cut prices. He had nothing whatever to do with the signing of the undertaking. After the signing of the agreement he saw Mr. Levy again, and Mr. Levy told him then that he had no intention of keeping his undertaking unless all the other cut price traders were brought into line. Cross-examined by Mr. Sharp, witness said it was untrue that he was sent by the plaintiffs to induce Mr. Levy to sign the undertaking. He agreed that it was almost impossible to find a trader in Leather Lane or Farringdon Street who did not cut prices. The defendant, Mr. Sidney Solomon Levy, gave evidence in support of his case as to the alleged misrepresentation. He declared that 99 per cent. of the shopkeepers and 100 per cent. of the street traders in the vicinity of Leather Lane and Farringdon Street were "cut pricers." Before he signed the undertaking he received a letter from the plaintiffs pledging themselves to take effective steps to maintain their full prices in the neighbourhood. He was positive that Mr. Blackshaw and Mr. Parker came to see him before he signed. He said that apparently everybody else was to be allowed to do what he liked, and asked Blackshaw and Parker how they could expect him to keep up the prices when half a dozen others within a stone's throw were cutting prices. Blackshaw, supported by Parker, said he could rest assured that if he signed the undertaking the plaintiff company would stop the price cutting. "For the rest of 1933 I stopped cut prices. The effect on my business was disastrous. At the beginning of January 1934 I started again to cut prices because I had to do it, as the plaintiffs had wholly failed to carry out their promise to protect me." Cross-examined by Mr. Birkett, witness denied emphatically that he was being assisted by anybody to fight this action. Mrs. Levy and Miss Esther Levy gave corroborative evidence. Mr. John Frederick Parker, commercial traveller in the employ of Darwen, Ltd., Sheffield, and formerly occupying a similar position with the plaintiff company, said that when he and Blackshaw went to see the defendant it was before the undertaking was signed. They persuaded him to promise to sign on the assurance that other cutters would be dealt with. Mr. Justice Luxmoore, giving judgment, said the evidence of the defendant, of his wife and of his sister, was most unreliable. With regard to Mr. Parker, he thought his memory was not good. The defendant therefore failed in his action unless he wished to continue it on the question of validity or that there was no consideration for the undertaking. Mr. Sharp said that after his lordship's decision the question of the validity of the patents was of no interest to his client. His lordship said he would consent to treat the whole action as being before him and grant the injunction asked for, with costs. The counterclaim would be dismissed with costs.

New Companies and Company News

P.C. means Private Company and R.O. Registered Office

KAYROX, LTD. (P.C.).—Capital £100. Objects: To carry on the business of chemists, druggists, etc. R.O.: 57-58 Chancery Lane, W.C.2.

GRANT'S DRUG STORES, LTD. (P.C.).—Capital £500. Objects: To carry on the business of chemists and druggists, etc. R.O.: 33 Chatsworth Road, E.5.

DUNFORD (CHEMISTS), LTD. (P.C.).—Capital £100. Objects: To carry on the business of pharmaceutical chemists, herbalists, etc. R.O.: 354 Clapham Road, S.W.9.

DEME PRODUCTS CO., LTD. (P.C.).—Capital £100. Objects: To carry on the business of chemists and druggists, etc. R.O.: 112 Barrack Road, Newcastle-upon-Tyne.

CORBET'S CASH CHEMISTS, LTD. (P.C.).—Capital £500. Objects: To carry on the business of chemists and druggists, opticians, etc. R.O.: 163 Hylton Road, Sunderland.

HAILE WESTON SPRINGS, LTD. (P.C.).—Capital £1,000. Objects: To carry on business as bottlers of medicinal waters from natural springs, etc. R.O.: 25 Haymarket, S.W.1.

PRESS (CHEMISTS), LTD. (P.C.).—Capital £500. Objects: To carry on the business of manufacturers of and dealers in chemicals, drugs, chemists, druggists, etc. R.O.: 18 Charing Cross Road, W.C.2.

SHERWOOD PARK DRUG STORES, LTD. (P.C.).—Capital £500. Objects: To acquire the business of Sherwood Park Drug Stores carried on by Emily C. Jones at 67 Sherwood Park Road, Mitcham, Surrey.

O'BRIEN, CHEMISTS, MIDDLETON, LTD. (P.C.).—Registered in Dublin. Capital £100. Objects: To carry on the business of chemists, druggists, etc. Thomas K. O'Brien, Middleton House, Middleton, co. Cork, director.

L. LIGHT & CO., LTD. (P.C.).—Capital £1,000. Objects: To acquire the business of a chemist and fine chemical manufacturer carried on by Louis Light. R.O.: 6 Featherstone Buildings, High Holborn, W.C.1.

RAZVITE, LTD. (P.C.).—Capital £1,000. Objects: To carry on the business of manufacturers of and dealers in shaving cream, soaps, cosmetics, etc. The first directors are to be appointed. Solicitor: Fredk. G. Maw, 12 Norfolk Street, W.C.2.

JOHN CROSS & CO. (DISPENSING CHEMISTS), LTD. (P.C.).—Capital £2,000. Objects: To acquire the business of a dispensing chemist carried on by Catherine Macrae of 21 High Street and 96 Garlands Road, Redhill, Surrey, as "John Cross & Co."

CRYSTAL PRODUCTS (IRISH FREE STATE), LTD. (P.C.).—Registered in Dublin. Capital £1,000. Objects: To carry on the business of wholesale and retail dealers in cosmetics, toilet preparations and requisites, etc. The first directors are not named.

MRS. POMEROY (IRELAND), LTD. (P.C.).—Registered in Dublin. Capital £2,400. Objects: To carry on the business of manufacturers and distributors of and dealers in all kinds of hair and skin and toilet preparations, perfumes, soaps, etc. The first directors are not named.

MEDICATED FABRICS, LTD. (P.C.).—Capital £2,000. Objects: To carry on the business of manufacturers of and dealers in medicated and medicinal articles, etc. The first directors are to be appointed. Secretary: J. A. Lawrence, 17 Eden Close, Manor Farm Road, Alperton, Middlesex.

CHEMICAL & NATURAL PRODUCTS, LTD. (P.C.).—Capital £10,000. Objects: To carry on the business of manufacturers of and dealers in all kinds of medicines, drugs, etc. The first directors are to be appointed. Solicitors: Stephenson Harwood & Tatham, 16 Old Broad Street, E.C.2.

UNIVERSAL DIATHERMATIC LABORATORIES, LTD. (P.C.).—Capital £1,000. Objects: To acquire from the present owners, Maurice H. Ballantyne and Wenceslas F. Sklenar, the right to

manufacture and market a chemical compound called "Thermo-compound," etc. R.O.: 15 Hanbury Road, Acton, W.3.

OCALDO PRODUCTS, LTD. (P.C.).—Capital £2,000. Objects: To acquire the manufacturing business now carried on by M. O'Callaghan at 50 John Street, All Saints, Manchester, and to carry on the business of manufacturers of and dealers in soap and washing materials, salves, powders, toilet requisites, etc. R.O.: 50 John Street, All Saints, Manchester.

LYON & LYON, LTD. (Public company).—Capital £220,000. Objects: To acquire the business formerly carried on by Stainsby & Lyon, Ltd., and to carry on the business of manufacturers and dealers in chemicals, benzole, naphtha and other mineral, vegetable and animal oils, tar and its products, etc. Harry L. Lyon, Hillam Hall, Monk Fryston, Yorks, director.

SPRATT'S PATENT, LTD..—Final dividend declared of 1s. 6d. a share and a bonus of 6d. a share on the ordinary capital, making a total payment of 3s. a share, or 15 per cent. for 1935 (unchanged). In addition, a special bonus of 6d. a share is to be distributed to commemorate the company's jubilee.

NOTICE has been given in "The London Gazette" that the names of the under-mentioned companies have been struck off the register and the companies dissolved:—Drug Services, Ltd.; Hayston Mineral Water Co., Ltd.; The Herblod Ointment Manufacturing Co., Ltd.; Medical Dental and Associated Services, Ltd.; Parker Sulphur Products, Ltd.; Singers Cash Chemists, Ltd.; Smith (The Chemists), Ltd.; Vitaminproducts and Vitaminwines, Ltd.; Vitiza Fertilisers, Ltd.

COW AND GATE, LTD..—Directors offer a further 1,485,000 ordinary shares of 1s. at a premium of 1s. per share to ordinary shareholders, in the proportion as nearly as may be of one new share for every three shares held. The shares will not be entitled to participate in any interim dividend declared in respect of current year, but will be entitled to dividend of one-half of the amount of the final dividend declared in respect of year ending September 30, 1936. Thereafter they will rank for dividend *pari passu* in all respects with ordinary shares already issued. Proceeds of issue will be devoted to general development of company's business.

BORAX CONSOLIDATED, LTD..—The thirty-eighth ordinary general meeting was held in London on Wednesday, February 26. The Earl of Leven and Melville, chairman, stated that the company's further recovery had been due not to increased prices, but to expansion in demand for its goods. The outlook for the industry was promising. New uses for borax were being developed and the industries on which the company relied for much of its business were increasing their demands. It had been found that a small percentage of borax in the soil was essential to most plant growths. It was being introduced into the soil in various countries, and this might lead to a very important demand. The net profits were £338,896 13s. 3d., or £40,368 more than in the previous year. With carry-forward from last year, £214,387 11s. 9d., there was £553,284 5s. to deal with. The first and second debenture stock interest amounted to £112,500, the dividends on the preference shares to £44,000, and the sinking fund on the first debenture stock to £5,825 and with £50,000 to buildings depreciation reserve, the total of these items was £212,325, and deducting this from the total of £553,284 5s., there is left a balance of £340,959 5s. Dividend of 6 per cent. for the year on the preferred ordinary shares takes £36,000; dividend of 1s. per share, or 5 per cent., on the deferred ordinary shares, takes £57,500; to income-tax reserve £10,000, and to pensions and grants fund £5,000. This will leave a balance of £232,459 5s. to carry forward. The directors' report and audited accounts were carried unanimously. Mr. H. F. Johnson, who recently completed thirty years in charge of the sales department, was, on the board's recommendation, elected a director of the company.

Private Arrangements

F. W. Sellors, 34 Cross Cheaping, Coventry, chemist and druggist. At the meeting of the creditors, held recently at Coventry, the statement of affairs showed liabilities of £311 12s. 10d. The assets amounted to £536 19s. 4d., and were estimated to realise £188 5s. 4d. After allowing £145 12s. for preferential claims the net assets were £42 13s. 4d., or a deficiency of £268 19s. 6d. Proper accounts had been kept, and they showed that during 1923 the turnover was £3,166. with a net profit of £345. In the subsequent years the turnover declined but net profits were earned. It was decided to confirm the deed of assignment already executed to Mr. T. J. Prentice, 10 Queen's Road, Coventry, whilst a committee was also appointed.

Maurice Behrman, 3 Burdon Road, and 48 Ettrick Grove, Sunderland, chemist, etc. The creditors were called together recently at South Shields, when the statement of affairs showed ranking liabilities of £2,000 15s. 4d., made up as follows: Sundry creditors, £651 18s. 2d.; cash claim, £550; and partly secured creditor, £798 17s. 2d. The latter was the bank, who claimed £841 17s. 2d., and they held a life policy of the surrender value of £43. In addition the bank held third-party guarantees. The assets totalled £913 16s., or a deficiency of £1,086 19s. 4d. The debtor commenced trading in January, 1925, at 3 Burdon Road, Sunderland. A branch business at Ettrick Grove was opened in October, 1931. In 1932 the turnover was £2,529, with a net profit of £122, and in the following year there was a net profit of £117 on a turnover of £1,850. In 1934 the turnover was £1,798, and there was a net loss incurred of £55. The drawings had been small. It was estimated that since January 1935, there had been a net loss incurred on the trading of £574. In that period the purchases were £801, with sales of £1,505. The gross profit was £312, but the expenses totalled £886. It was decided that a deed of assignment should be executed to Mr. A. L. Friends, South Shields, subject to the cash claim being withdrawn, and arrangements made for repayment of the bank overdraft.

Voluntary Liquidation

Clegg & Co., Ltd., Victoria Laboratories, Castleford, manufacturing chemists. At the statutory meeting of the creditors, Mr. J. W. Clegg, the managing director, presided, and it was reported that the usual resolution had been passed for the voluntary liquidation of the company with Mr. F. W. Hanson, I.A., of Castleford, as liquidator. The statement of affairs showed ranking liabilities of £650 10s. 10d., of which £237 7s. was due to the trade and £413 9s. 10d. to a cash creditor. After allowing £45 12s. 3d. for preferential claims the net assets were £67 6s., or a deficiency, so far as the creditors were concerned, of £583 10s. 10d. The assets comprised: Cash in hand, £13 19s. 3d.; plant and machinery, £50; stock, £39 1s. 6d., expected to produce £20; good book debts, £26 19s.; and doubtful debts, £8 19s. 7d., estimated to realise £2. The issued capital of the company was £3,003, fully paid, and as regarded the shareholders there was a deficiency of £3,586 10s. 10d. Last December a receiver was appointed by the debenture holder as the interest was in arrear. The receiver, it was stated, sold a retail business, and out of the proceeds the debenture was discharged and a balance of nearly £300 was handed over to the company. A resolution was passed confirming the voluntary liquidation of the company, with Mr. Hanson as liquidator.

Business Changes

MR. JOHN BORROWDALE THOMPSON, Ph.C., has opened a pharmacy at Woodvale Road and Enfield Street, Belfast.

MR. R. CHARLESTON, chemist and druggist, has opened a new business, under the name of The Fountain Pharmacy, at 5 High Street, Loanhead, Midlothian.

MR. L. J. KEMP, M.P.S., has taken over the "Knight's Hill Pharmacy," 41 Knight's Hill, West Norwood, London, S.E.27, from Mr. G. H. Moorhouse, chemist and druggist.

OWING to street widening, the premises of A. & N. Catto, Ltd., at 393 Mile End Road, London, E.3, are being demolished. More commodious corner premises at No. 391 Mile End Road have been purchased.

Items in Parliament

In the House of Commons recently the following private members' bills have been among those presented:—

Workmen's Compensation Bill. To amend the existing law.

Employers' Liability Bill. "To amend the law relating to the liability of employers to their workmen for injuries caused by the negligence of fellow workmen."

Local Authorities (Enabling) Bill. "To extend the powers of local authorities in matters of finances and municipal trading."

LOST DRUGS

Asked whether his attention had been drawn to the increasing number of instances in which "dangerous" drugs and poisons had been lost in transit or stolen from unattended vehicles, the Home Secretary (Sir John Simon) replied that he thought there was no reason to suppose that there had been any increase in the number of such cases, although they had recently had more publicity through broadcasting. The remedy seemed to be in the exercise of more care and good sense by those concerned, and he hoped that the wide publicity would help to achieve that result.

ILLEGIBLE PRESCRIPTIONS

Lieutenant-Colonel Moore asked the Home Secretary whether, in view of the recent disclosures at coroners' proceedings that doctors write prescriptions so illegibly that in many cases the address and signature were indecipherable and of the serious developments to which such practices were giving rise, especially in the issue of drugs, he would consider taking action to ensure that prescriptions should not be dispensed unless easily legible.

Sir J. Simon: I have no information that would lead me to suppose that the practice referred to is prevalent or has been productive of any harm to the public. There are . . . various legal requirements in regard to the dispensing of poisons and "dangerous" drugs which seem to provide such safeguards as may be necessary.

CALF LYMPH FROM RABBITS

Mr. Leach asked the Minister of Health whether rabbits were still used in the Government lymph establishment in connection with the production of calf lymph, notwithstanding the opinion of certain vaccination experts that the use of rabbits was probably the cause of the cases of post-vaccinal encephalitis which have followed the use of such lymph.

Sir K. Wood: Yes, Sir. I am advised that there is no valid evidence to suggest that the use of rabbits in the preparation of lymph has any influence on the occurrence of post-vaccinal encephalitis. In reply to further questions, the Minister said he would not consider the advisability of closing down that department of work, and that he was not aware that it was most undesirable that the vaccine should be transferred from calves to rabbits in view of changed nature and increased virulence.

AMIDOPYRINE

Mr. Hall-Caine asked the Home Secretary whether his attention had been called to the increase of deaths by poisoning due to pyramidone; and whether steps would be taken to ensure that it would be classed as a poison at the earliest opportunity.

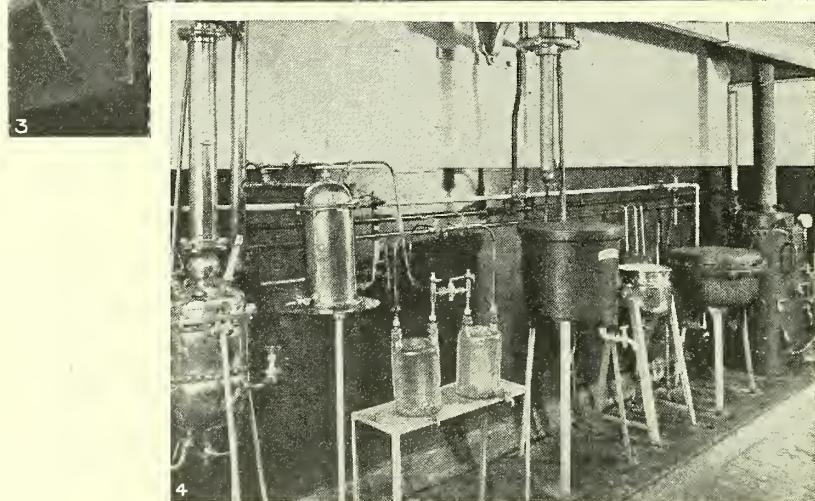
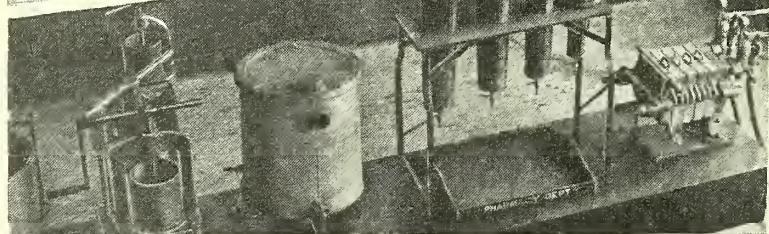
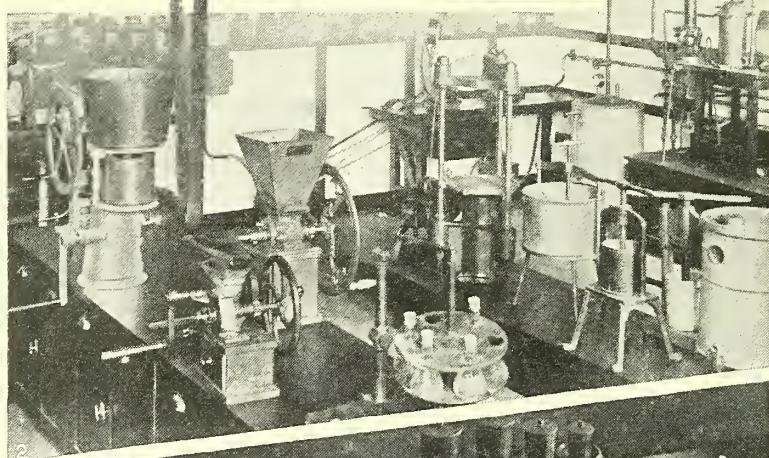
Sir J. Simon: Yes, Sir. Under the new Poisons List and Rules which are to come into operation on May 1 next, this drug (which is more correctly described as amidopyrine) will be scheduled as a poison, and its sale to the public will be unlawful except on medical prescription.

MANUFACTURE OF MEDICINES

Sir E. Graham-Little asked the Home Secretary whether he would state what was the precise meaning to be attached to the word "manufacture" as used in Rule 29 of the Poisons Board Rules issued in December 1935; and whether that word covered the processes of compounding and dispensing medicines containing poisons and used for the treatment of internal human ailments.

Mr. Lloyd: . . . It seems to me clear that the word "manufacture," both in the Act and in the Rule, denotes only the operations carried on in factories by manufacturers, and does not cover such operations as the compounding and dispensing of their own medicines by medical practitioners.

1. In the galenical laboratory, Welsh College of Pharmacy, Cardiff. A maceration barrel is shown fitted with apparatus for upward filtration.

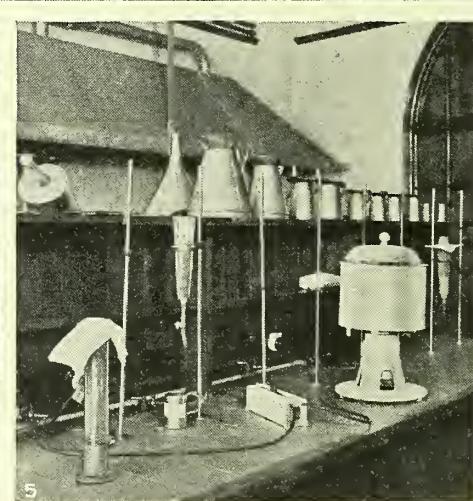
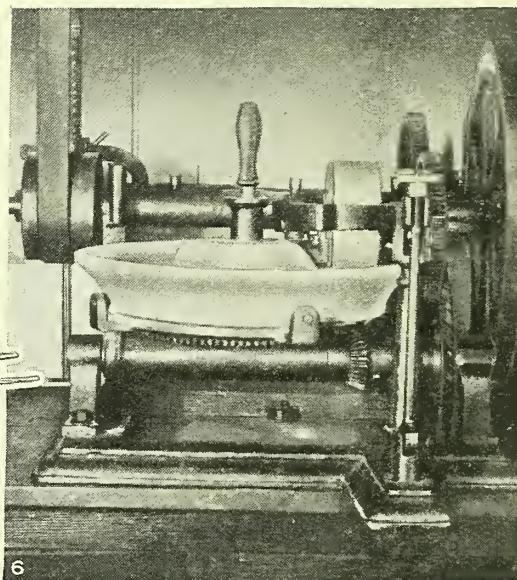


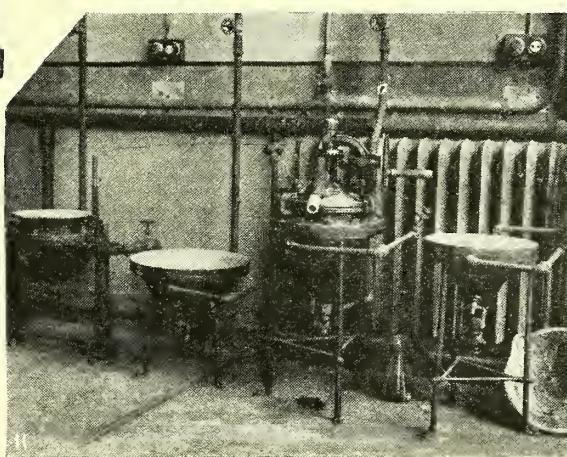
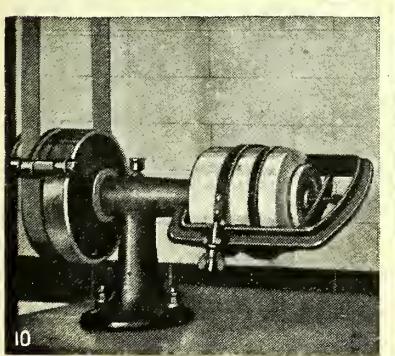
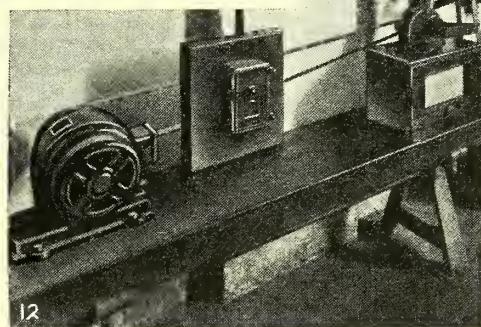
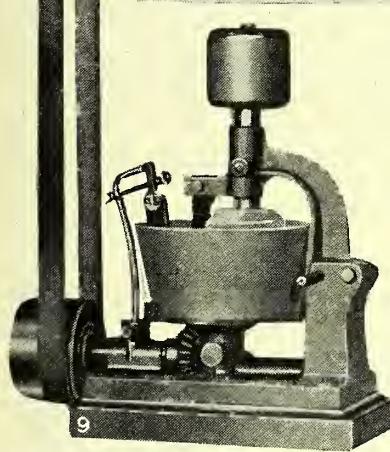
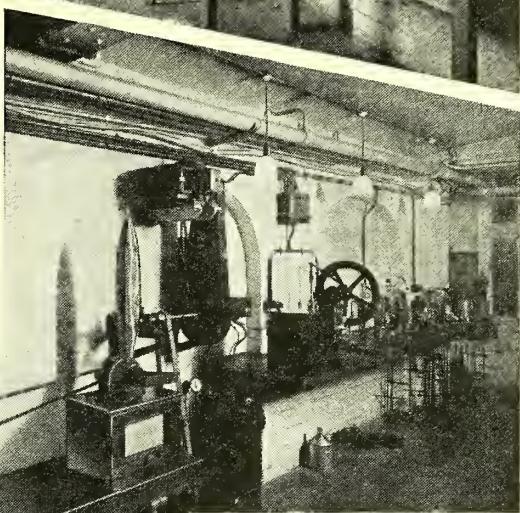
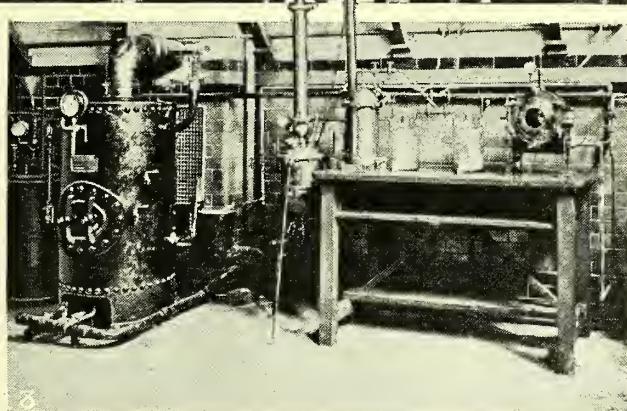
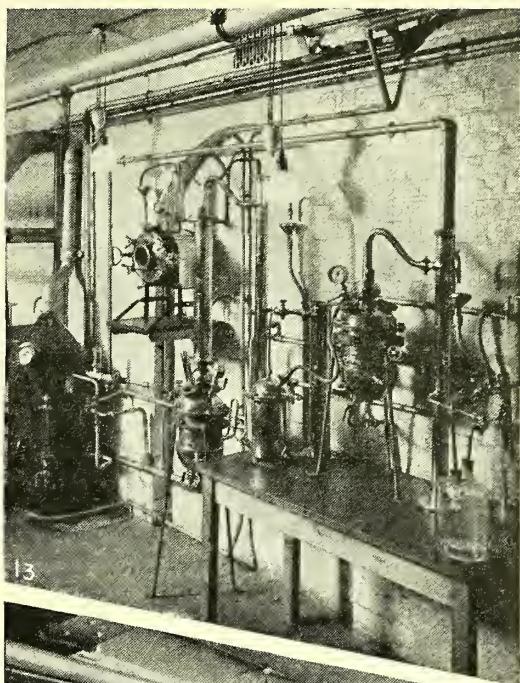
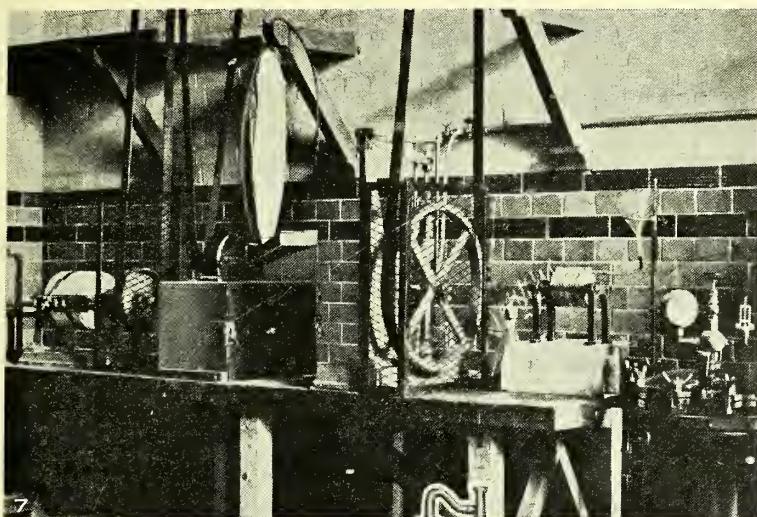
Machinery in the Pharmacy Schools

2 & 3. Pharmacy Department, Royal Technical College, Glasgow. Apparatus in the Department.

4 & 5. The galenical laboratory, Birmingham Central Technical College. The apparatus includes vacuum still and extractor; Stokes still; filling kettle; enamel evaporating pan; steam boiler; centrifugal crystal dryer with stainless-steel utensils.

6. Carr's patent edge-runner mill with Minton-ware pan, at the Pharmaceutical Department, University of Manchester.





7 & 8. Leicester College of Technology Pharmacy Department. Small-scale manufacture laboratory and (below) tincture and extraction apparatus.

9 & 10. Mechanical mortar and Hunter's emulsor, Royal Technical College, Glasgow.

11. Steam jacketed pans, etc., in the galenical laboratory, Welsh College of Pharmacy, Cardiff.

12 & 13. Apparatus and equipment at the College of the Pharmaceutical Society, London.

Pharmaceutical Society of Northern Ireland

Council Meeting

THE monthly meeting of the Council was held on February 21 in the Society's offices, 73 University Street, Belfast, the president (Mr. W. S. Taylor) in the chair. There were present also Messrs. Samuel Gibson (vice-president), J. E. Connor, S. S. Badger, H. F. Moore, J. T. Nicholl, S. H. Forrest, W. C. Tate, Charles Abernethy, James McDowell, W. Martin, James Glendinning, John W. Gray, Professor James Small, Professor E. B. C. Mayrs, and Dr. S. E. A. Acheson. Mr. D. L. Kirkpatrick (secretary) was in attendance. Apologies for absence were received from Sir Thomas McMullan and Mr. R. I. Edwards.

NEW MEMBER WELCOMED

THE PRESIDENT extended a welcome to Mr. Gray on taking his seat at the Council, having been co-opted in place of Mr. A. C. McBride, resigned. New blood on the Council was all to the good, and he had much pleasure in introducing Mr. Gray to the Council.

CORRESPONDENCE

New Year greetings were received from the Pharmacy Board of New South Wales, also from the registrar and president of the Board.

A letter was received from six students at the Belfast Municipal College of Technology on behalf of the referred students in pharmacognosy at the last examination, desiring to know how they stood with regard to the syllabus for that subject in the examinations next June.

MR. GIBSON said the Council had decided this two years ago. It was agreed to inform the students that the syllabus would have to be adhered to.

EDUCATION COMMITTEE

The Education Committee recommended that the Certificate of Apprentice to a Pharmaceutical Chemist be granted to the following candidates, who had submitted certificates from the undernoted bodies:—

Robert J. King, 9 Thorndale Avenue, The Roddens, Larne (Junior Certificate Examination, Ministry of Education, N.I.).

William Gorman, Lancasterian Street, Carrickfergus; Leslie L. Herbert, 18 Clifton Park Avenue, Belfast; Patrick J. McQuillan, Ozone Avenue, Ballymoney; Patrick G. McKeague, Railway Road, Coleraine; John McCoubrey, Hillmount, Cullybackey; Sydney Isaacson, 24 Glantane Street, Belfast (Senior Certificate Examination, Ministry of Education, N.I.).

William H. Adams, 39 Tate's Avenue, Lisburn Road, Belfast (Pharmaceutical Preliminary Examination, Queen's University of Belfast).

William Donaldson, 31 Clarendon Street, Londonderry (Matriculation Examination, Queen's University of Belfast).

Henry Alexander Adams, Main Street, Lisnaskea, co. Fermanagh (Junior Freshman Examination, Trinity College, Dublin).

Miss Margaret Montgomery, The Brooke, Ballymacash, Lisburn (Royal College of Surgeons Preliminary Examination).

It was agreed that the Committee recommend the appointment of the following examiners for the year 1936:—

Botany and Pharmacognosy, Professor J. Small, D.Sc.
Business Methods, Mr. Boyd Harris, M.Com.Sc.
Chemistry, Mr. Hugh Graham, D.Sc.
Physics, Professor K. G. Emeléus.
Pharmacy, Mr. Theo. Harper, M.P.S.

It was agreed that the summer examinations be held during the week beginning June 15, 1936. The examiners' reports were considered.

The Committee considered the following suggestion in a letter from the president:—"That the principals or their assistants should compile a quarterly report of the attendance of students at technical schools throughout the Province." It was agreed that it be a recommendation from the Committee that the technical schools recognised by the Society should be asked by the Council to notify the apprentice master when the student is absent from any class.

THE PRESIDENT said that in Enniskillen the principal told him the attendances were fairly regular, but occasionally assistants and apprentices who had got out to attend the

classes had not done so. He thought that the employers should know when they did not attend.

MR. McDOWELL moved that the report be referred back to the Committee. Had there been any advertisement for examiners, or had they just taken the old ones over again?

MR. ABERNETHY, in seconding, advocated advertising for examiners. There might be others outside worth giving a trial to.

MR. NICHOLL moved, and MR. CONNOR seconded, that the minutes be adopted except the matter of the appointments, which was to be referred back.

MR. TATE said the Education Committee felt no slight at the matter being referred back.

MR. McDOWELL finally withdrew his motion in favour of a proposal that the minutes be adopted except the matter of the examiners, which was referred back. The minutes as amended were adopted.

OTHER SOCIETIES' MEETINGS

A letter was read from the Ulster Chemists' Association accepting the offer of the Council that they should hold their meetings in the Society's headquarters free of charge and agreeing to pay a small sum towards the lighting and heating.

The secretary was instructed to invite the Chemists' and Druggists' Society of Ireland to hold their meetings in the Society's headquarters.

EXTENSION GRANTED

Mrs. Isabel Ardis, Newtownhamilton, and Mrs. T. N. Moffett, 291-295 Crumlin Road, Belfast, were granted extension for a further period of five years to carry on business, the former as a druggist and the latter as a pharmacist.

DEATH

DR. ACHESON referred to the death of Mr. John Abernethy, one of the oldest members of the trade and uncle of their colleague on the Council, Mr. Charles Abernethy. He said Mr. Abernethy qualified in 1877 and was for many years with Thomas McMullan & Co., Ltd. He was a very fine man.

MR. BADGER joined in the tribute to Mr. Abernethy. It was directed that a letter of sympathy be sent to his son, Mr. R. B. Abernethy, Ph.C.

MR. CHARLES ABERNETHY returned thanks, observing that the family had nearly 200 years of service to the drug trade in Northern Ireland through his father, his uncle, his cousin, and himself.

DEATH OF KING GEORGE V

MR. MOORE said that was the first meeting of the Council since the death of his Majesty King George. He moved that a resolution of sympathy be sent to King Edward and Queen Mary, through the Governor, and at the same time congratulating the King on his accession.

MR. CONNOR seconded the resolution, which was supported by MR. GLENDINNING. The resolution was passed.

OTHER BUSINESS

MR. McDOWELL urged that steps should be taken to have protection for the trade. The matter had been up before and had been referred to the General Purposes Committee.

THE PRESIDENT said there had not been a meeting of that Committee since.

MR. ABERNETHY mentioned the proposed Benevolent Fund.

THE PRESIDENT said a circular would be sent to the whole trade in March.

MR. GLENDINNING said they had £20 for the purpose already in Londonderry.

The following nominated candidates were elected as members of the Society:—Miss Theresa I. Hanlon, Market Street, Downpatrick; Mr. John W. Wright, Derryhale, Portadown; Mr. Joseph D. Sheils, 23 Park Road, Belfast; Mr. David McRae Honeyman, 37 Antrim Road, Belfast.

Notes on Machinery

Some details are given herewith of the plant and machinery advertised in this special Machinery issue.

MIXERS AND STIRRERS.—Diagrams of some standard models of fluid mixers and stirrers for agitating, blending and mixing are given by L. A. Mitchell, Ltd., 37 Peter Street, Manchester. Geo. Porteus (Leeds), Ltd., Leeds Bridge, Leeds, who specialise in automatic spraying and grinding plant, illustrate a new sifter and mixer which has recently been installed at a large factory in Yorkshire. J. Booth & Son, Ltd., Congleton, Cheshire, illustrate and give details of all types of machines made by them.

MIXING MACHINES for ointments, creams, pastes, powders and liquids are obtainable from W. Rowlandson & Co., 75 Mark Lane, London, E.C.3.

EMULSIFYING MACHINES.—Pentesales, 6 Jewry Street, London, E.C.3, make the Pentecrème hand emulsors; two models are described. This apparatus is specially valuable in preparing toilet requisites. The Empire emulsifying machine is made by British Emulsifiers, Ltd., Teddington, Middlesex. Small sizes for operating by hand are described as well as the larger emulsifiers which are electrically operated for large-scale manufacture.

FILLING MACHINES.—The "Acme" filling machine which is intended for shallow tins or jars is made by F. P. Jackson & Co., Ltd., 18 Earle Street, Liverpool, 3. J. G. Jackson & Crockett, Ltd., Darnley Street, Glasgow, S.1, make a patent filling machine for all powder materials. L. T. Lauder, 46 St. Martin's Avenue, Leeds, 7, gives details of a filling machine which is made of stainless steel, all fittings being chromium plated. The

Lauder filling nozzle is made in gun-metal chromium plated, and worked by hand grip. Particulars of all types of filling machines will be sent on request.

GARDNER MACHINERY.—Wm. Gardner & Sons (Gloucester), Ltd., Bristol Road, Gloucester, make a comprehensive announcement in regard to some of the machinery which they manufacture. This includes plant for grinding, crushing, drying, sifting, etc. Manufacturers are invited to consult Messrs. Gardner in regard to the appropriate machine for the type of product made.

BALANCES.—William A. Webb, Ltd., 4 and 5 Skinner Street, London, E.C.1, make an announcement in regard to their British-made balances which are issued with a guarantee for accuracy, sensitivity and durability.

BOTTLE CLEANING MACHINERY.—The Thomas Hill Engineering Co. (Hull), Ltd., 9 Park Lane, Stepney, Hull, offer gratis an authoritative book on the correct process of bottle cleaning. This book gives the latest developments in modern machinery, equipment and methods.

SELF-PRIMING PUMPS (Sihi Patents) are manufactured and distributed in this country by Rhodes, Brydon & Youatt, Ltd., Gorsey Mount Street, Stockport. The advantage of these pumps is that no priming with water is needed before they start, nor is a foot-valve required on the end of the suction pipe. The pumps are stated to be simple in construction and suitable for direct coupling to electric motors or petrol engines or for belt drive.

Cold Storage in the Pharmacy

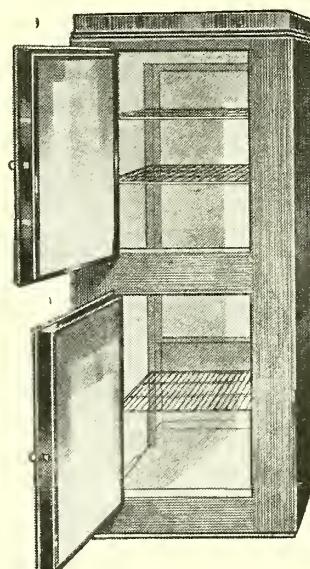
WITH the advancement in medical knowledge the question of how best to store certain medicinal products is of special importance. Particularly is this so in regard to biological products which if kept in rooms or receptacles where temperature is high are apt to deteriorate with undesirable rapidity. Even so common a preparation as calf lymph has to be stored with due regard to the possibilities of decomposition. Manufacturers and wholesalers can obviously regulate the temperature which surrounds the preparation of

such products up to the moment of despatch, but it is for the pharmacist to see that so far as he is concerned consideration has to be given to maintaining a temperature at which decomposition is prevented. In the British Pharmacopoeia, 1932, storage requirements are laid down in regard to biological products. Diphtheria prophylactic when stored at a temperature from 0° to 10° C. retains its specific properties for eighteen months. Undiluted toxoid in the official language of the B.P. is "stable at room temperature for at least two years." Anti-dysentery serum (Shiga)

should be kept at as low a temperature as possible above freezing point. Schick test toxin should be stored at a temperature not exceeding 10° and if undiluted retains its potency for six months. Special storage directions are given also for many other substances, notably insulin and liquid extract of ergot. Apart from the official requirements, however, there are many ways in which a cold storage chamber is of special value to the pharmacist who is called upon to deal with problems related to pure pharmacy. There is, for example, the preparation of hypodermic solutions. Distilled water for sterilised solutions or the solutions themselves can be kept in a cold chamber for a much longer period than if allowed to remain in the dispensing department. Again, with regard to suppositories, pessaries and bougies, the products can promptly be made ready for despatch to the patient if a refrigerator is available. The introduction of such apparatus as is illustrated on this page is novel, but all authorities agree that biological products at least should be kept in cold storage at the required temperature. In view of the growing importance of biological medication pharmacists may no doubt consider it advantageous to install a cold storage chamber as part of the ordinary equipment of their pharmacy. The cost is reasonable when due consideration is given to their usefulness.



Aerofridge domestic refrigerator



Kelvinator cabinet model

Trade Notes

MICKEY MOUSE PRODUCTS.—Addis, Hertford, announce an addition to the Mickey Mouse series of articles in nail brushes which are issued in assorted colours. Details are given elsewhere in this issue.

MANICURE CREAM.—Allcock Manufacturing Co., 22 Hamilton Square, Birkenhead, have recently introduced a new manicure cream, Nailoid, which it is claimed gives a complete manicure in two minutes. An advertising campaign in the London evening papers will be inaugurated on March 1. Nailoid is packed in attractive blue and ivory moulded jars in quarter dozen display cartons. The distributors are J. Gaw & Co., 65 Hatton Garden, London, E.C.1.

WINDOW DISPLAY CONTEST.—Wigglesworth, Ltd., Westhoughton, Lancs, announce a window display contest of Opas Brand Maclean Digestive Powder. Generous prizes are offered for the winning windows.

BRITISH INDUSTRIES FAIR.—Some of the visitors who called at the C. & D. stand at the British Industries Fair during the first week came from Roumania, Palestine, Holland, Germany, Stockholm, Belgium, Newfoundland and Portugal.

CHELSEA PENSIONER.—Evans Sons Lescher & Webb, Ltd., 56 Hanover Street, Liverpool, have recently issued Chelsea Pensioner in the form of tablets. These products are packed in bottles of two sizes, namely 25 and 100.

HORLICK'S TABLETS.—Horlick's Malted Milk Co., Ltd., Slough, Bucks, announce that after February 29 no further orders for the flask of Horlick's tablets can be accepted, this size being withdrawn in favour of a tube which is sold at a lower price.

CORRUGATED PAPERS AND BOXES.—The Medway Corrugated Paper Co., Ltd., Blackfriars House, New Bridge Street, London, E.C.4, had a striking stand at the British Industries Fair, Olympia, on which products of their manufacture were prominently displayed.

"IODINE-MEDOL" ASEPTIC OINTMENT.—Pearson's Antiseptic Co., Ltd., 172 Buckingham Palace Road, London, S.W.1, drew attention to Iodine-Medol Aseptic Ointment, Analgesic Ointment Medol Brand, and "909" Anti-Flu Compound in last week's issue of THE CHEMIST AND DRUGGIST. These products are being advertised in the daily Press.

PHANTOM RAZOR.—Ashford, Webb, Ltd., 40 Trinity Square, London, E.C.3, are the distributors of a new type of safety razor. This article has a rubber guard which is virtually non-perishable and has the advantage of maintaining the blade at the correct shaving angle yet permitting of ample adjust-



ment to suit every type of blade. Another advantage of the Phantom razor is that it will take any type of three-hole blade. The Phantom rubber-cushioned razor is attractively packed in a two-colour carton, and display material and literature are available.

META-TITANIUM OINTMENT.—Bengue & Co., Ltd., 24 Fitzroy Street, London, W.1, have issued this preparation which, it is claimed, is a soothing application for all skin lesions.

MAGNESIUM TRISILICATE.—Elsewhere in this issue Kaylene, Ltd., Waterloo Road, London, N.W.2, announce their Mag-sorbent brand of magnesium trisilicate, which is described as a powerful antacid and adsorbent for use in the treatment of peptic ulcer and dyspepsia. An extensive advertising campaign to the medical profession will shortly be inaugurated.

OPTREX.—Wilcox, Jozeau & Co. (Foreign Chemists), Ltd., North Circular Road, Cricklewood, London, N.W.2, inform us that the medium-size bottle of Optrex has been reduced in price, but it will no longer be issued with an eye bath packing. The reduced price will operate to the retail trade on March 1 and to the public on April 1. Wholesale orders for this size will be invoiced at the new price from now onwards.

P.A.T.A. YEAR-BOOK.—We have received a copy of the "Protected List and Year Book, 1936" (pp. vii + 292) of the Proprietary Articles Trade Association. The volume includes the list of officers, manufacturers and local secretaries, the rules, the annual report and the financial statement. Particulars of the National Pharmaceutical Union, the Chemists' Defence Association, Ltd., the Chemists' Mutual Insurance Co., Ltd., and the Chemists' Sickness and Provident Society are also given.

RADIUM FACE CREAM.—Gloriosa Beauty Co., Ltd., 18-20 Lower Regent Street, London, S.W.1, are marketing three types of cream, foundation skin food—cold, cleansing skin food and hand bleaching cream. Handbag size of foundation cream is also available. This is packed in cartons of twelve, the other sizes being packed in cartons of six which may be assorted. The carton itself bears a label which enables the container to be used on the counter or on a window shelf.



EXPORT TRADE LIST.—Ayrton, Saunders & Co., Ltd., 34 Hanover Street, Liverpool, 1, have recently issued an Export Trade List of 210 pages, profusely illustrated, of their drugs, packed goods, specialities, etc. The list is thumb indexed for ready reference.

CHILPRUFE MEDICAL BELT.—The Chilprufe Manufacturing Co., Leicester, are offering on attractive terms the Bolton Chilprufe Medical Belt, which is intended for the alleviation of complaints of the bladder, kidneys, prostate gland, etc. Full particulars have been given in our advertisement pages.

WHOOPING COUGH VACCINE.—Schering, Ltd., 188-192 High Holborn, London, W.C.1, draw attention to Petein, which is described as a new whooping cough vaccine. This preparation is issued in original bottles of $2\frac{1}{2}$ c.c., which is sufficient for four injections, comprising a course. The outstanding advantages of Petein are its high concentration, complete detoxication, and the fact that the course of four injections can be completed in seven days. A brochure on the subject is obtainable on application.

WINDOW DISPLAY COMPETITION.—In conjunction with a newspaper window-display competition for retailers, special Stablond prizes were given for the best window displays of these products. The winners are as follows: First prize, £25, Freeman's, 143 Lancaster Road, Preston, Lancashire; second prize, £15, S.T. James, M.P.S., 420 Hoe Street, Walthamstow, London, E.17; third prize, £10, T. W. Leach, M.P.S., 200 Main Street, Wilsden, Bradford. In addition, consolation prizes were awarded. Stablond shampoos are distributed by J. C. Gambles & Co., Ltd., 211-215 Blackfriars Road, London, S.E.1.

Births

Notices for insertion in this column must be properly authenticated

HALL.—At 16 Bannatyne Street, Lanark, on February 16, the wife of George Hall, M.P.S., F.S.M.C., of a son.

Deaths

ANDERSON.—At the Medical Hall, Five-miletown, co. Tyrone, on February 22, the wife of Mr. Robert S. Anderson, Ph.C.

BARFORD.—At Clyde House, Dover Street, Ryde, on February 9, Mr. Herbert William Barford, retired chemist and druggist, aged seventy-four. Mr. Barford carried on for many years the pharmacy of Gibbs & Gurnell, 34 Union Street.

BLAIN.—The funeral of the late Mr. W. R. Blain, Ph.C., Bolton, whose death was announced in our issue of February 22 (p. 215), took place at Heaton Cemetery on February 19. Among the family mourners was Mr. A. L. Blain, Ph.C. (brother), and the congregation also included representatives of the Bolton Branch of the Pharmaceutical Society, the Bolton Insurance Committee, the Chamber of Trade, the Royal Infirmary Extension Committee, the Parish Church, and James Woolley, Sons & Co., Ltd., Manchester. There were numerous floral tributes.

STEVENSON.—At his residence, Eaglehurst, Ditton Hill, Surbiton, on February 18, Mr. William Stevenson, F.C.S., aged seventy-eight. Until his retirement from business some six years ago Mr. Stevenson was managing director of Stevenson & Howell, Ltd., essence and essential oil distillers, Southwark Street, London, S.E.1, which company was formed in 1898 to acquire the undertaking originally established in 1882 by Mr. William Stevenson and the late Mr. Reginald Howell (who died in 1912). In his earlier years Mr. Stevenson was an accomplished rider and a well-known yacht owner. His two sons have followed him in the business, and the elder, Mr. R. W. Stevenson, M.A., F.C.S., is joint managing director.

WALKER.—On January 25, from injuries received while motor cycling, Mr. George Turton Walker, Ph.C., Wraysbury (Parke, Davis & Co., Hounslow), aged fifty-six.

GALLOWAY.—At 25 Larpent Avenue, London, S.W.15, on February 17, Mr. Philip Henry on Galloway, chemist and druggist (P. H. Galloway, Ltd., manufacturing chemists, 154-162 Walworth Road, S.E.17), aged seventy-eight. Mr. Galloway passed the Qualifying examination in 1889, at which time he was in the employ of Wright, Layman & Umney, Southwark Street, S.E.1. In October 1890 he commenced in business on his own account in the retail trade at 74 Deacon Street, Walworth, and a few years later launched out into the wholesale trade as a packer of druggists' sundries, for which purpose he took premises at Peacock Yard, Walworth. In 1898 the business had expanded to such an extent that he had to move into larger premises at Baden Place, Borough, S.E.1, where he remained until 1913, when he built a model factory at the present address in Walworth Road. This was further increased to three times its size in 1923. In 1915 Mr. Galloway formed Jules Frères, Ltd., for the manufacture of toilet preparations ; trade in these goods has now extended to practically all countries in the world. Mr. Galloway converted his business into a private limited company in 1923, giving certain of his older employees a substantial share interest ; the business is now a

public company with a capital of £220,000. Mr. Galloway took an active interest in the business up to the time of his death, and remained chairman to the end. He was held in great esteem by everyone who knew him.

Personalities

MR. A T. RUTHERFORD, M.P.S., Newbiggin-by-the-Sea, has obtained the Fellowship diploma of the National Association of Opticians.

MR. T. S. STONIER, chemist and druggist, North Shields, has been elected chairman of the North of England Joint Insurance (Prescriptions) Committee.

At Crufts Dog Show in London, recently, a challenge certificate was awarded to a bloodhound, Witnesham Marksman, belonging to Mrs. V. A. Cook, chemist and druggist, Ipswich.

WE have received a postcard from Mr. G. H. Zeal (G. H. Zeal, Ltd., Merton, London, S.W.19), addressed to us from Buenos Aires, which he describes as a most beautiful city. Mr. Zeal was at the time of sending the card on his way to Monte Video and the Falkland Islands.

MR. WILLIAM COLLISON, managing director of William Blythe & Co., Ltd., manufacturing chemists, Church, Lancs, has been entertained to a complimentary dinner in celebration of completing fifty years' service to the industry. Acknowledging the gift of a silver salver, signed by English, German, Belgian, French and Chilean members of the committee of the International Saltcake Association, Mr. Collison drew a comparison between old and present working conditions and wages.

Wills

MR. WILLIAM FREDERIC BUTCHER, Ph.C., of Four Gables, Edward Road, Bromley, Kent, a director of British Photographic Industries, Ltd., and chairman of Butcher, Curnow & Co., Ltd., chemists, 33-35 Tranquil Vale, Blackheath, S.E., who died on January 12 last, left estate gross value £12,197, with net personality £9,584.

MR. FRANCIS RANSOM, Ph.C., F.C.S., Newlands, Hitchin, Herts, chairman of William Ransom & Son, Ltd., manufacturing chemists, who died on December 19 last, aged seventy-six, left estate gross value £472,398, with net personality £431,566, on which £138,407 12s. 2d. has been paid in estate duty. Among other bequests were the following :—£1,000 to the North Herts and South Beds. Hospital, Hitchin, if still a voluntary hospital ; £200 to the Benevolent Fund of the Pharmaceutical Society of Great Britain.

Coming Events

Tuesday, March 3

Paisley and District Chemists' Association. Whist drive and dance.

Wednesday, March 4

The Pharmaceutical Society, Harrow Branch, Gayton Rooms, Station Road, Harrow, at 8.30 p.m. Annual meeting.

Thursday, March 5

Pharmaceutical Society, Pontypridd and Rhondda Branch, New Inn Hotel, Pontypridd, at 8 p.m. Annual dinner and dance. Tickets 6s. 6d. each.

Pharmaceutical Society, Bedfordshire Branch, George Hotel, Luton, at 7.30 p.m. Annual dinner and dance.

North London Pharmaceutical Association, Manor House Hotel, Finsbury Park, at 7.30 p.m. till 12 midnight. Last dance of the season. Tickets 2s. 6d. each.

Manchester Pharmaceutical Association and Branch, Victoria Hotel, Deansgate, Manchester. Mr. E. S. Peck (president, Pharmaceutical Society) on "Educational Problems."

Friday, March 6

South-West London Chemists' Association and Branch. Meeting. Address by Mr. G. A. Mallinson.



Photo]

[Lafayette

MR. P. H. GALLOWAY

he remained until 1913, when he built a model factory at the present address in Walworth Road. This was further increased to three times its size in 1923. In 1915 Mr. Galloway formed Jules Frères, Ltd., for the manufacture of toilet preparations ; trade in these goods has now extended to practically all countries in the world. Mr. Galloway converted his business into a private limited company in 1923, giving certain of his older employees a substantial share interest ; the business is now a

Telegrams : "Aoleine Sedist, London."

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COLD CURE CAPSULES
A remedy which brings repeat orders. 1/3 size 9/- doz.
Send for Sample and Full Particulars

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IN BULK
H.R.NAPP LIMITED,
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4oz. (1/8) 1/-
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Hall, Forster & Co., Ltd.
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MEDICAL FLATS, PANELS, POISONS
Good Quality
Keen Prices
GLASS BOTTLES
Buy from the
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THE C. & D. "POISONS GUIDE." Price 3s. 6d., by post 3s. 9d.

PHARMACEUTICAL FORMULAS (P.F., Vol. I). Price 15s., by post 15s. 9d.

PHARMACEUTICAL FORMULAS (P.F., Vol. II). Price 15s., by post 15s. 9d.

THE C. & D. PRICE LIST FORMULARY, "P.L.F." Price 2s. 6d. post free.

THE CHEMISTS' DICTIONARY OF MEDICAL TERMS. Price 3s. 6d., by post 3s. 8d.

DISEASES AND REMEDIES. [Price 5s., by post 5s. 3d.

PRACTICAL METHODS OF URINE ANALYSIS. Price 4s., by post 4s. 3d.

"THE CHEMIST AND DRUGGIST," 28 Essex Street, W.C.2

Information Department

INFORMATION WANTED

Postal or telephone information with respect to makers or first-hand suppliers of the undermentioned articles will be appreciated.

B/25. Arkematacyal	B/25. Orilene capsules (present address)
D/22. Casa liniment	S/20. "Quisat" for smoking
B/26. Hastings' textile cleaning stick	W/24. Rayner's baby cream
L/25. Melford's magic stick for removing stains	E/25. Spinach pills
B/25. Prenatalax	S/26. Tonka (for rheumatism) not Tonga

THE
CHEMIST AND DRUGGIST

VOL. CXXIV.

February 29, 1936

NO. 2925

Pharmacy and the Machine

In this issue we have endeavoured to bring before the manufacturing, wholesale and retail sides of the trade modern aspects of the use of machinery in regard to the manufacture of drug-trade commodities. Before drawing attention, however, to the equipments themselves it is opportune to commend the thoroughness with which pharmacy schools throughout the country have dealt with the question of teaching large-scale manufacture to pharmacy students. The Pharmacy and Poisons Act, 1933, gives to pharmacists, among others, permission to control manufacturing processes. It has been obvious that the university-trained chemist has looked upon the pharmacist as a person who is unacquainted with modern manufacturing procedure. The illustrations in the article entitled "Machinery in the Pharmacy Schools" will in themselves be sufficient to disprove any such suggestion; and the fact has to be recognised that training in pharmacy is, and always has been, an important starting point towards erudition in scientific knowledge. We have seen how the *laissez faire* attitude of the Council of the Society in the past has opened the door to a multitude of poison sellers in the so-called interests of the public. It may be that the official view will be proved in time to be a sensible one. In the meantime pharmacists may derive satisfaction from the knowledge that they are recognised as having the requisite skill to manufacture poisons as well as to sell them under certain restricted conditions.

To revert to the chapters on pharmaceutical machinery we publish an informative article on tablet-making machinery. This manufacturing process is a closely guarded secret, especially in regard to excipient, granulation and coating, yet much depends on the choice of apparatus, as will be seen in the article referred to. Emulsifying machines are obtainable which show that much progress has been made in regard to design with satisfactory results so far as the finished article is concerned. The advantages of stainless steel in chemical manufacture, surgery and retail pharmacy are also described in this issue, and there is an article on lighting for manufacture which follows on the lighting of retail shops which has been discussed in recent numbers of THE CHEMIST AND DRUGGIST. The notes on some small-scale apparatus are intended for the chemist whose interest in pharmaceutical machinery is limited to his retail business. An indication is given of the importance of cold storage for biological and other products. This question of storage is raised officially for the first time in the British Pharmacopoeia, 1932, and its importance is bound to grow as the practice of medicine moves in accordance with scientific knowledge and achievement. In the advertisement pages of this issue there are numerous announcements by manufacturers who cater specially for the chemical and drug trades.

January Trade Returns

THE generally quiet tone in most markets during the first month of the year, when the falling off in demand was rather noticeable, is reflected in the Trade and Navigation Accounts for January. With imports of all classes of merchandise showing an increase of slightly more than eight million pounds compared with the value of arrivals during the corresponding month of the previous year, and exports (including re-exports) showing a decline of nearly two million pounds, the debit trade balance for the month is the highest recorded for some years, being £41,244,106. The value of our shipments inwards during January was nearly double that of our shipments outwards:—

All Classes of Merchandise	Imports	U.K. Goods, Exports	Total Exports, including Re-exports
January, 1936	£ 70,023,783	£ 34,459,583	£ 38,779,677
" 1935	61,916,364	35,481,098	40,515,070
" 1934	64,571,442	31,609,383	35,682,464

In the section of the month's trading returns concerning "Chemicals, Drugs, Dyes and Colours," the figures show the same trend, with an increase in the value of imports and a decrease in exports and re-exports. There is, however, in these classes of goods, still a substantial credit trade balance, the January figure being £744,624; during 1935 it averaged about £810,000 monthly. The increase of over £100,000 in the value of the chemical imports during January, compared with the landings during the corresponding month of 1935, is, no doubt, due to our increased industrial activity.

Chemicals, Drugs, Dyes and Colours	January		
	1936	1935	1934
Imports	£ 1,007,187	£ 902,139	£ 1,004,904
Exports of U.K. goods ...	1,725,010	1,877,556	1,553,509
Re-exports	26,801	31,671	25,411

Among the few products detailed in the January import accounts are: CITRIC ACID, 3,411 cwt., valued £12,104 (£1,999 cwt., £6,578 in 1935); TARTARIC ACID, 2,718 cwt., valued at £10,787 (£298 cwt., £5,563 in 1935); QUININE AND SALTS, 209,655 oz., valued at £15,275 (70,326 oz., £5,081 in 1935); PROPRIETARY MEDICINES, £66,388, compared with £42,722 in January, 1935. The chief sources of supply for the month were Germany with £297,197 (£254,947 in 1935); United States, £194,512 (£177,955 in 1935); France, £71,628 (£63,557 in 1935); Switzerland, £62,479 (£51,563 in 1935); Holland, £49,302 (£47,058 in 1935); Belgium, £44,632 (£40,193 in 1935). Russia sent us goods to the value of only £2,885 in January, 1936, compared with over £11,000 in the first month of 1934 and 1935. Of the total value of U.K. Chemicals, etc., exported during January of this year, £1,004,810 was shipped to Empire destinations, while our exports to foreign countries totalled £720,000. India, with purchases totalling £232,583 (£248,500 in 1935); Australia, with £168,383 (£149,441 in 1935); and New Zealand, with £63,105 (£57,968), were our best Empire customers. Shipments to Canada fell away badly, totalling only £56,318, compared with £71,440 in the corresponding month of 1935.

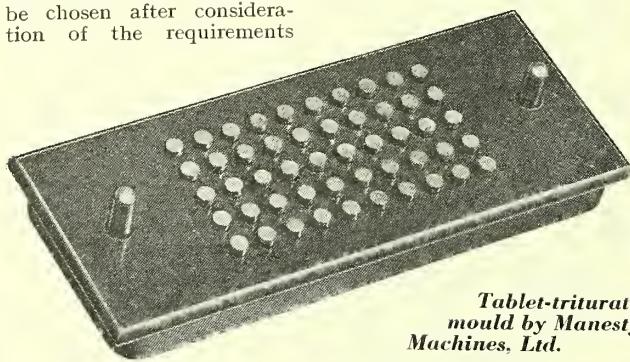
Tablet-making Machinery

The choice of apparatus for the making of tablets depends to a large extent on the output required

THE equipment required for the manufacture of tablets varies considerably as it bears a direct relationship to the output. The small factory may be content to mix and granulate by hand and compress on single punch machines, whereas at the other end of the scale the maker will mix and granulate mechanically and will compress on large rotary machines with a big output. In the average tablet department which is part of the manufacturing equipment of the usual wholesale and manufacturing chemist will be found a variety of machines ranging from small size single punch machines to rotary machines capable of a large output. These latter are used for turning out the popular tablets such as aspirin, cascara, soda mints, and so forth. As much time is involved in changing the punches and dies on a rotary machine it is customary to set up such machines for a standard job. Minor adjustments only are then required. Punches and dies can readily be changed on the single, double or triple punch type, and these machines are therefore used for the tablets for which there is a smaller demand and for special tablets. The demand for special tablets is quite large, as many pharmacists and doctors have special prescriptions made up in tablet form.

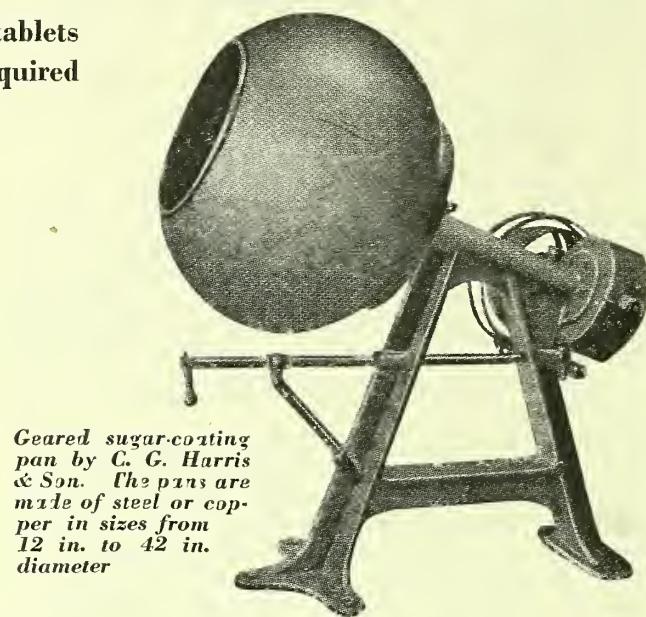
Choice of Plant

Tablets are required to act in various ways—some approximate to powders, some to pills and yet others to lozenges. A different manufacturing technique is required in each case. The methods to be applied can be understood by a consideration of the active ingredients in the tablet. The section in "Pharmaceutical Formulas," Vol. I, dealing with tablets should be consulted for the general rules to be observed in the preparation of the granules for tabletting. The plant required for a small tablet department includes at least one granulating machine, of which there are several types available. The machine should be chosen after consideration of the requirements



Tablet-triturate mould by Manesty Machines, Ltd.

of the department. Sieves of various meshes will be required and adequate drying cupboards with suitable trays. In addition, a small mixing machine for preparing the material for granulating. Finally, the tablet machines. Choice can be made between having each machine with individual electric motor drive or having a main shaft and belt-driven machines. The machines must of necessity be of various sizes and capacities if it is intended to turn out a variety of tablets. It is obvious that some of these are required in hundreds and some in millions, and therefore a variety of machines is required. A simple single punch machine which is capable of adjustment between $\frac{1}{8}$ in. and $\frac{1}{2}$ in. die is suitable for all the usual tablets required in small quantities. The output of such a machine is of the order of ninety tablets per minute. Heavier single machines to make large solution tablets and probably one or more rotary machines will complete the equipment. If prescription work is to be undertaken it will probably be worth while installing



Geared sugar-coating pan by C. G. Harris & Son. The pans are made of steel or copper in sizes from 12 in. to 42 in. diameter

one hand-operated machine. Further requirements are an adequate supply of punches and dies of standard sizes and a small lathe on which the dies and punches can be polished. This is a highly skilled operation, and too much attention cannot be paid to keeping the dies and punches in first-class condition. A range of dies and punches from $\frac{1}{8}$ in. diameter, rising by $\frac{1}{32}$ in. to $\frac{3}{4}$ in. diameter will probably meet all ordinary requirements.

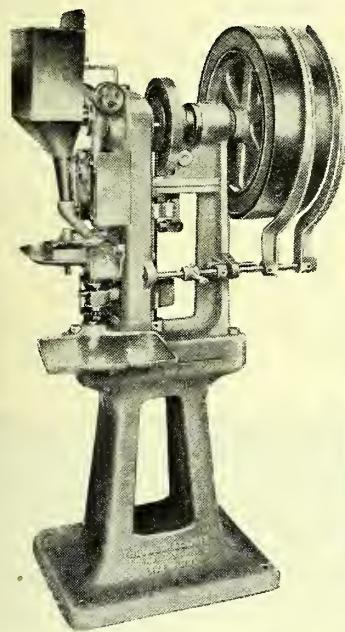
Granulation

In the manufacture of tablets it should be noted that a number of substances do not require granulation. They are manufactured and sold in a finely crystalline or granular form and are ready for immediate compression. Amongst these materials are ammonium bromide, potassium bromide, potassium chlorate, sodium chloride and acetylsalicylic acid. Most other substances require to be granulated, and this is effected by mixing the dry powders with a suitable liquid such as mucilage of acacia, syrup, gelatin solution, water or alcohol. Mixtures of these solutions may also be used. Sufficient liquid is mixed with the powder to make a coherent mass which will readily granulate when forced through a sieve or through the screen of a granulating machine, without sticking to the meshes of the sieve. The granules so prepared are spread on trays and dried in a current of warm air. When thoroughly dry the granules are again sifted—generally through a No. 16 sieve—and a lubricant is added. Few granulations can be compressed without the addition of lubricant to prevent their adherence to the punches and dies. Liquid paraffin, talc, boric acid, stearin and oil of theobroma are all used as lubricants, but it is a maxim of good tablet making that whenever possible no lubricant at all should be used. When a lubricant is necessary it should be chosen with care and used as sparingly as possible. It is frequently found that a combination of two lubricants will give better results and enable a much smaller quantity to be used. The granules are now ready for compressing. It should be noted that in the case of tablets that are required to disintegrate rapidly a proportion of starch must be mixed with the granules. The amount of starch required is from 10 to 15 per cent. of the weight of the finished tablet, and either potato or maize starch will do.

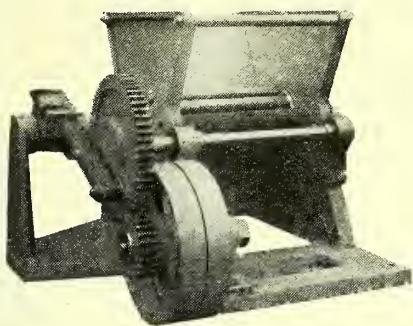
Compression of the Granules

All single punch machines are similar in that they all possess a hopper, a feeding shoe from which the die is filled

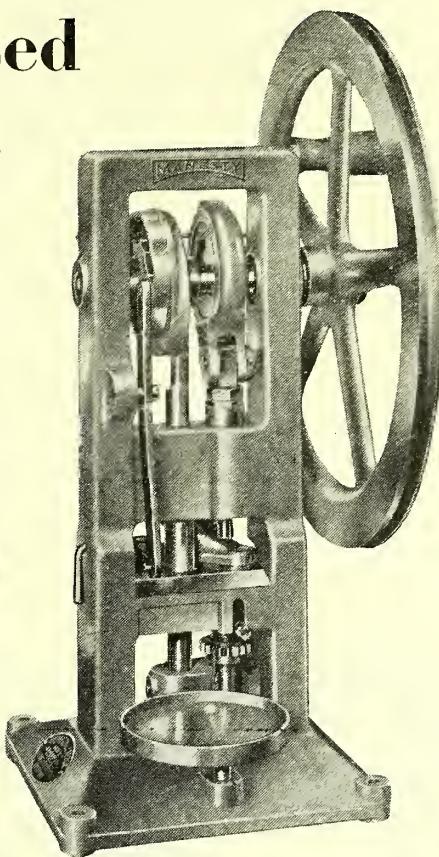
Machines used in Tablet Making



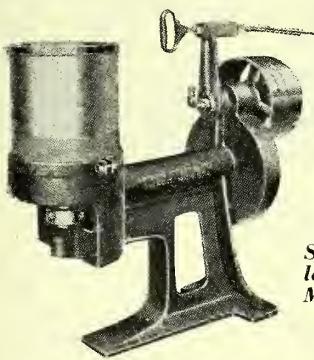
Single punch machine for tablets and compressed lozenges up to $\frac{3}{4}$ in. diameter, by Manesty Machines, Ltd.



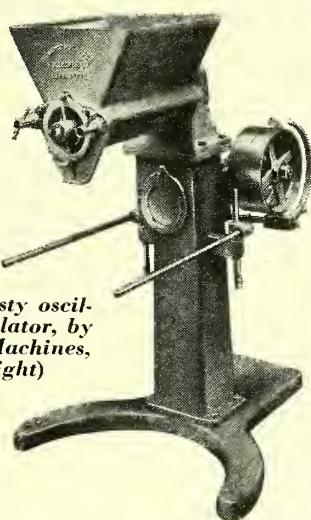
Geared dry granulator designed for breaking up hard material, by E. H. and E. Walker & Co.



Hand tablet machine, by Manesty Machines, Ltd.

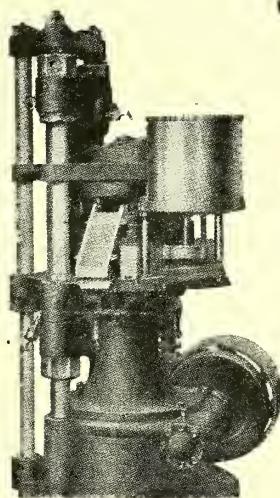


Stokes Manesty oscillating granulator, by Manesty Machines, Ltd. (right)

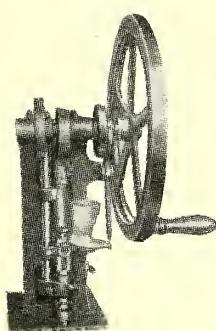


Machine of 120 tablets per minute capacity, by E. H. and E. Walker & Co.

(Above) Rotary wet granulator, by Arthur Colton Company

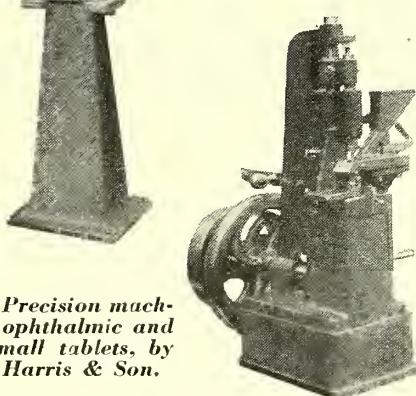


(Right) Tablet machine made by S. W. Wilkinson & Co.

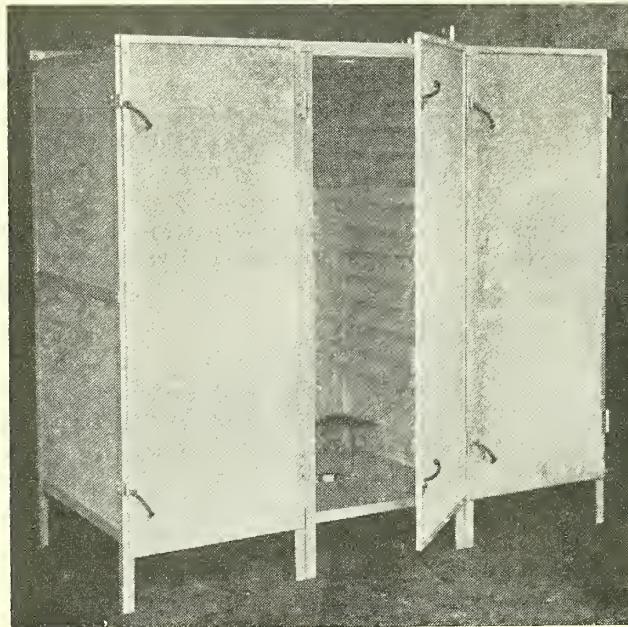


(Right) Precision machine for ophthalmic and other small tablets, by C. G. Harris & Son.

(Left) Hand-tablet machine by J. W. Pindar & Co.



and which pushes away the finished tablets, a platform in which the die is locked in position, and upper and lower plungers which hold and operate the two punches. The upper plunger is capable of adjustment up or down and this adjustment enables the hardness of the tablets to be regulated. The lower plunger can also be adjusted and by this means the weight of the tablets can be varied. Full instructions for running their machines are given by all the makers so that it is unnecessary here to go into great detail. A few important points, however, are worthy of mention. When set up the top of the die must be flush with the platform of the machine, the lower punch must rest firmly on the bottom of the lower plunger and the face of the punch when at the top of its travel must be flush with the top of the die. If it is too high it will damage the feeding shoe, if too low the tablets will be spoilt as they are pushed off by the shoe. In order to ensure perfect alignment of the punches and die it is a good plan to allow the upper punch to project some distance into the die when it is being locked into position. When the punches and dies are in position a small quantity of the granulation should be put into the hopper and the machine turned over by hand. After two or three tablets have been made the pressure and weight can be adjusted and then about twenty tablets should be run off. The weight of the tablets should then be taken and any final weight adjustment made. The degree of compression should also be noted and adjustments made if necessary. Tablets which are to approximate to lozenges should be compressed hard so that the local effect in the mouth may be prolonged. Other tablets should be compressed hard enough to remain intact under ordinary conditions of handling. Experience is necessary to decide the correct degree of hardness



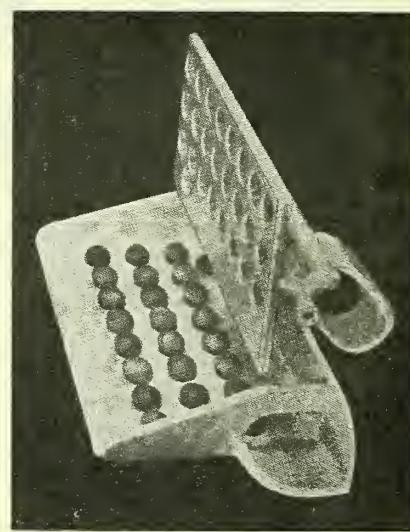
Electrically-heated drying cupboard for granules by C. G. Harris & Son

for all tablets. The three troubles of capping, picking and sticking will occur sooner or later and there are various causes for each of them. Capping is the term applied to the splitting off of the upper face of the tablet. A simple cause of capping is too much pressure, and by reducing the pressure very slightly the trouble is frequently overcome. Other causes are damp granules, too much powder amongst the granules or granules that are too soft. These last become powdery when pressure is applied. The cure in all cases is obvious. Other causes of capping are mechanical, such as an imperfect upper punch, or worn die, or incorrect alignment of punches and die. Picking describes the sticking of a portion of material to the face of the punch. Several of the causes of capping will also cause picking but quite a frequent cause is scratches on the face of the punch. Sticking refers to the adherence of

material to the die, and the causes are similar to those causing picking. The operation of a rotary tablet machine is quite different from that of the reciprocating type. The machine may have any number of dies from about nine to twenty-two. Each die has its corresponding upper and lower punch. The punches usually have specially shaped heads to allow them to be raised or lowered by means of rollers and cams. It is essential that all punches shall be of exactly the same dimensions so that pressure or weight can be adjusted on all sets of punches in one operation. The makers of rotary machines give the fullest operating instructions and these should be carefully followed. It is possible to fix counting and filling attachments to these large output machines and several makers have such attachments available.

Coloured, Coated and Poisonous Tablets

Tablets are sometimes required to be coloured and it should be remembered that to produce a tablet of uniform colour all the ingredients including the lubricant, if possible, should be coloured to the same tint. The colours used for oral tablets should be edible and should be fast to light. Chocolate tablets are generally made in the same way as ordinary tablets but a quantity of chocolate powder and cane sugar is added before granulation. One important point should be observed in the manufacture of solution tablets of the mercury salts. These are coloured in various ways, and the granules should be prepared and the tablets compressed on special machines in a separate department. Incidentally such tablets should be of distinctive shape. The makers of the machines can supply punches and dies of special design for such tablets. Certain tablets are required to be sugar coated. In order to make a satisfactory coated tablet the punches used should be more concave than for ordinary tablets. This will give a tablet which is thinner at the edge. Only by this means can a uniform sugar coat be applied. The coating is applied in coating pans of the same type as are used for pill coating. When the coating is sufficiently thick the tablets are polished by revolving in a pan which is coated with white beeswax. One other type of tablet is made known as the tablet triturate or moulded tablet. This tablet is most frequently used for hypodermic medication, although latterly many hypodermic tablets have been made by compression. These moulded tablets are made by moistening the powder with alcohol and pressing this moistened powder into circular holes in a metal plate. The tablets are then ejected and dried. The finished tablets are friable and readily soluble. Their chief disadvantage lies in the fact that they are bulky and that they readily break up during handling and transit.



Eclipse hand-operated tablet-counting machine by C. G. Harris & Son

PHARMACEUTICAL SOCIETY OF GREAT BRITAIN.—The annual report for the year 1935 of the Research Departments of the Pharmaceutical Society, which has lately been published, gives details of work and research undertaken during the period covered. The departments are Chemistry, Nutrition, Pharmacognosy, Pharmacology and Pharmacy. The number of samples for testing which a fee was paid during the year was 194 (166 in the previous year).

Emulsifying Machines

Considerable progress has been made in recent years both in the design and employment of emulsifying machines. The choice of a suitable apparatus has considerable bearing on the stability of an emulsion and the principles of typical machines are discussed in the following article.

EMULSIFICATION may be defined as the dispersion of one liquid in another with which it is substantially immiscible, the liquid dispersed being termed the disperse phase and the liquid in which the dispersion is effected, the continuous phase. In practice at least one other substance, the emulsifying agent, is also present, this agent assisting in the dispersion or breaking up of the globules of the disperse phase and the stabilisation (prevention of coagulation) of the small globules thus formed. The emulsions met with in the case of pharmaceutical and allied products are often much more complex than the simple three component system discussed

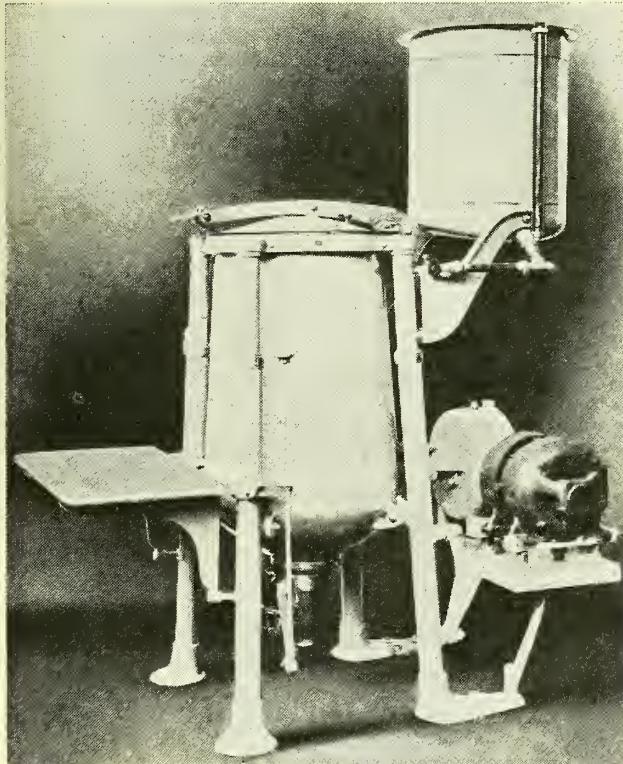
be used which is similar in principle to the works machine. A large number of different machines are now available for the preparation of emulsions and a full description of them all would be impossible. An attempt has therefore been made to classify the different types of machines and to give a very brief description of one or two typical machines in each class.

Agitation Emulsifiers

The two most simple methods of effecting emulsification by agitation are the pestle and mortar as used by the pharmacist, and a closed container, such as a bottle, which is vigorously shaken. Incidentally it has been shown that intermittent shaking (for example, thirty seconds pause between each two shakes) gives better results than continuous shaking for the same time. A further simple type of agitation emulsifier is a propeller, or preferably two propellers on the same shaft, the bottom one giving an upthrust and the top one a down thrust to the liquid. These mixers are frequently made in a portable form that can be clamped to the side of a suitable container and they can be either hand or power driven. The Lang mixers are representative of a type of emulsifier in which a rapid circulation of the emulsion is maintained by an impeller driven from a spindle passing through the bottom of the tank, the circulation being directed by a hollow baffle which may also serve as a heating, or cooling, element for the emulsion. The diagram (Fig. 1, p. 252) shows how the emulsion is circulated. Whisks, of which the Pfaudler whisk is a typical example, possess a beater mounted on a horizontal shaft which enters the body of the whisk at a point slightly above the hemispherical base. Many designs of beater are available, the multipronged blade and the basket type being common forms. Whisks are suitable for the preparation of many types of emulsions, especially where a high degree of dispersion is not required or where the product is to be subsequently homogenised. In cases where protein stabilising agents are used, it is an advantage to prevent aeration and this can be effected by using a whisk, with a special lid which enables the emulsification to be carried out *in vacuo*.

Colloid Mills

The term "colloid mill" was originally applied to Plauson's mill on account of the very fine emulsions and dispersions which were obtained with it, and the term has been applied ever since to emulsifiers in which the emulsion is subjected to shearing forces on its passage between the opposing faces of a fixed stator and a rotor running at 1,000 to 20,000 r.p.m. depending on the size and type of machine. Colloid mills can effect simultaneous emulsification and homogenisation as the separate phases of the emulsion may be fed in simultaneously or a coarse preformed emulsion may be treated to give a finely emulsified product, and hence both the names "colloid mill" and "homogeniser" are applied to them. Colloid mills are frequently criticised on account of the aeration produced, but this aeration can be overcome by arranging the feed so that no air can enter with the emulsion, and also by maintaining the packing of the rotor shaft in good order, as air tends to be drawn in at this point. The Premier high speed colloid mill consists of a rotor in the form of the frustum of a cone, the side of which is parallel to the stator surface, which forms a part of the front cover of the machine. The clearance between the rotor and stator is adjustable by means of a micrometer ring which has the effect of advancing or withdrawing the rotor axially with respect to the stator; working clearances usually lie between 0.003 in. and 0.020 in., although the clearance can be taken down to 0.001 in. The emulsion is fed in through the cover at a point opposite the axis of the rotor and is thrown outwards to the emulsifying surfaces by centrifugal force, being collected behind the rotor in an annular duct, from which it is drawn off. In the new type of Premier mill the emulsifying surfaces are corrugated



*The Pfaudler Glass lined Emulsifier and Feed Tank
(Enamelled Metal Products Corporation (1933), Ltd.)*

above, as both phases may contain dissolved liquids or solids and solid particles, as well as liquid globules dispersed in the continuous phase. Since emulsification consists essentially of the dispersion, or efficient mixing, of the phase to be dispersed in the continuous phase then it might be expected that any machine which will subject the product to a mixing, grinding or beating action should effect emulsification. This is true in a limited number of cases only, as the stability of the emulsion is of extreme importance commercially, and this will depend on the degree of the dispersion obtained, the absence of aeration, the time of treatment in the machine and the nature of the mechanical treatment given. Extreme care is necessary in designing an emulsifying machine which will give an emulsion of the maximum degree of stability. The best machine to use in any specific case will depend on the properties of the emulsion and its constituent phases, and it follows that in any small scale experiments which are being carried out with a view to subsequent works production a machine should

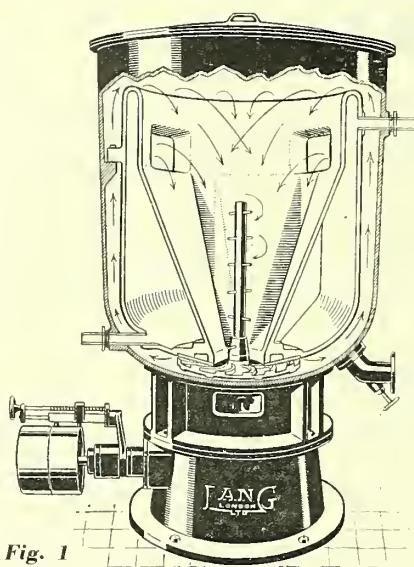


Fig. 1

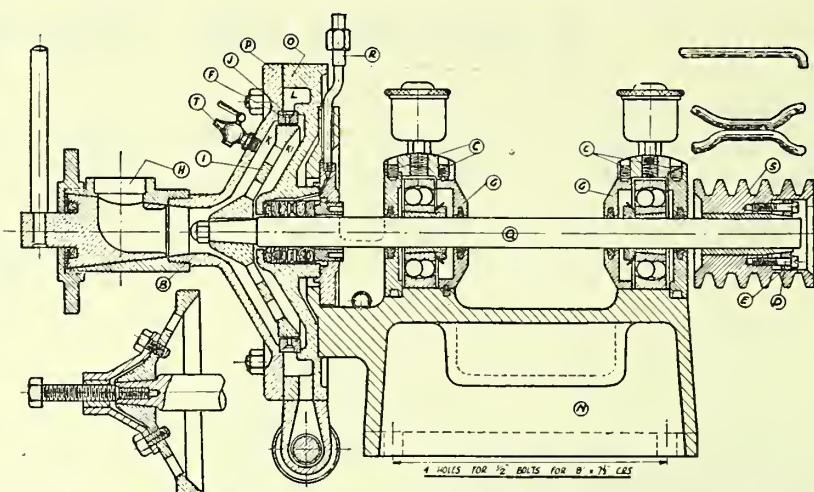
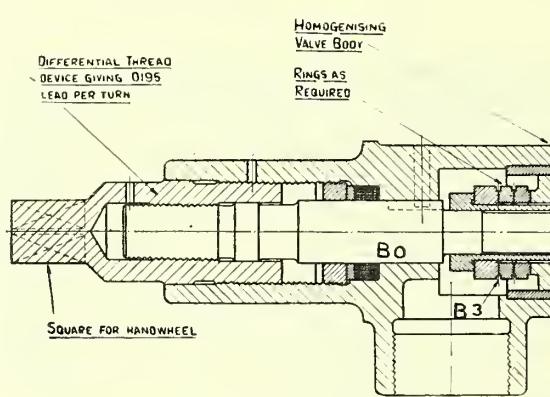


Fig. 2.—HURRELL HOMOCENISER.—(H) Inlet port; (I) Rotor; (F) Stator ring; (5) Outlet for emulsion through ring; (4) Annular duct for collection of the emulsion.

LANG EMULSIFIER-MIXER



DELIVERY PORTS TO VALVE CHAMBER

Fig. 3—BRUSH HOMOGENISING
VALVE

RELIEF VALVE PORT

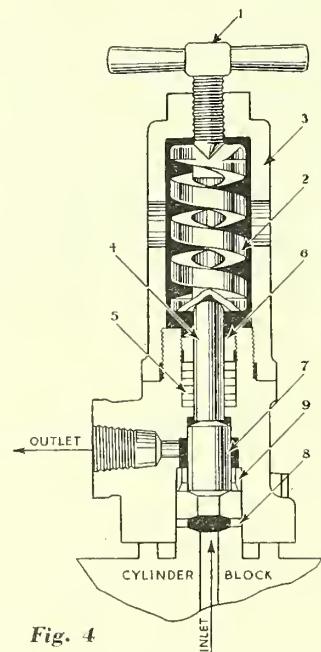


Fig. 4.—DUO-VISCO VALVE.—(1) Regulating screw; (2) Pressure spring; (3) Valve bonnet; (4) Valve stem; (5) Valve stem packing; (6) Packing gland; (7) Double-end viscolising valve; (8) "Blow-Proof" gasket; (9) Breaker ring and valve guide.

Fig. 5.—IMPULOSSOR EMULSIFIER.—(A) Inlet; (B) Plunger; (D) Non-return valve; Outlet valve; (G) Discharge port.

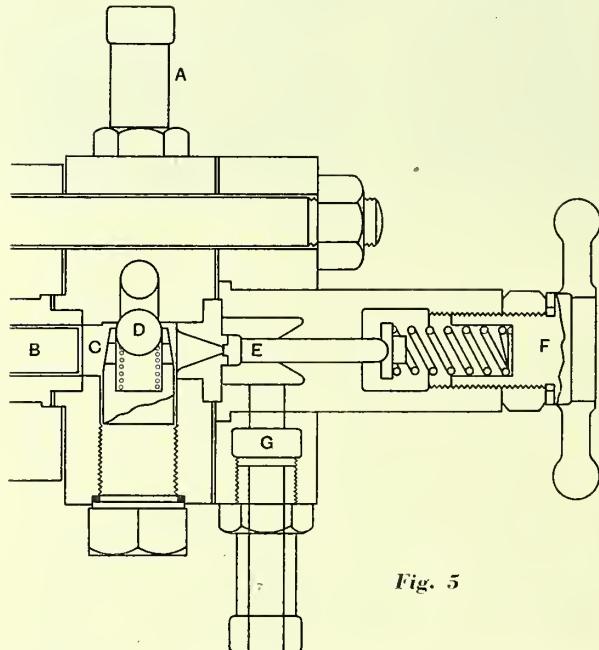
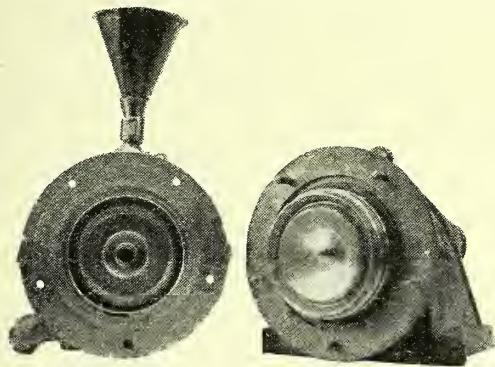


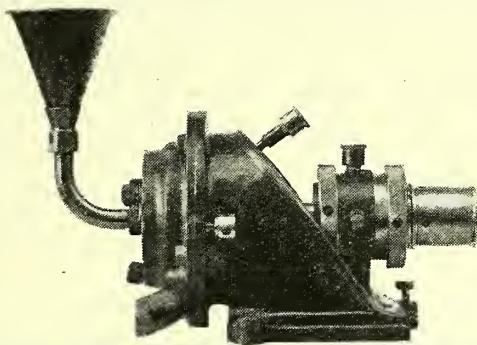
Fig. 5

and the mill has been designed to reduce aeration to a minimum. The emulsion is subjected alternately to shearing and impact disintegration on its passage through the machine, and the clearance between the rotor and stator decreases with the distance from the axis in such a way that the linear velocity of the emulsion passing outward remains substantially constant. The high speed mill is used mainly for normal liquid emulsions and for the more viscous systems the vertical type Paste mill is used. The rotor, which is of specially robust construction, is directly coupled to a motor running at 3,000 r.p.m. The Hurrell colloid mill (or homogeniser)



Premier Colloid Mill with stator removed
(Premier Colloid Mills, Ltd.)

has the emulsifying surfaces situated between the slightly tapered periphery of the rotor and the tapered inner surface of the body of the machine. Since the emulsifying surfaces are almost parallel to the axis of rotation of the rotor, there is only a slight centrifugal force acting on the emulsion at this point tending to make it leave the emulsifying zone. The capacity of the No. 1 machine can, therefore, be varied from 10 gallons per hour to 1,000 gallons per hour by adjusting the rate of feed and a corresponding variation in the intensity of treatment is obtained. Variation of the clearance is obtained



Premier Corrugated Mill for liquid emulsions
(Premier Colloid Mills, Ltd.)

by adjustment of a micrometer screw which moves the rotor laterally with respect to the tapered stator. The Model C Hurrell homogeniser has been specially designed for the treatment of small amounts of pharmaceutical emulsions and interchangeable stator rings are provided to give fixed clearances of 0.005 in., 0.010 in. and 0.020 in. The Hatt-Dussek homogeniser has two rotors facing in opposite directions and keyed to the same shaft, part of the inner surface of the two halves of the casing forming the stators. The machine has been designed to offer the minimum resistance to the flow of the emulsion through it, and the various models give a large output for their size and power consumption.

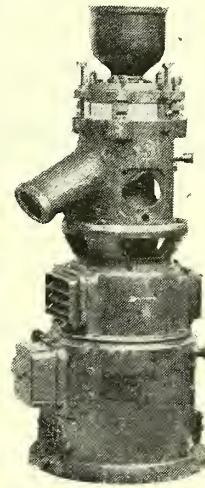
Grinding Emulsifiers

A number of grinding mills are available for the preparation of emulsions and these may find special application where there is a high proportion of solid present in the emulsion. The Kek mill has, for grinding, a stator fitted with concentric rows of

pins which overlap corresponding rows of pins in the rotor. The stator is fixed horizontally above the rotor, which is driven from below through a worm gear, rotor speeds of 5,000 to 7,000 r.p.m. generally being employed. For purposes of emulsification the pin discs can be replaced by discs having a series of four sharp corrugations which give four clearances of 0.015, 0.010, 0.005, and 0.005 inch respectively and through which the emulsion passes as it flows out radially. The Follows & Bate circulator mill can be used for the preparation of emulsions running as either a continuous or batch emulsifier. The stator is vertical and the emulsion is fed in through the centre, opposite the axis of the rotor, from which it is thrown outwards through the emulsifying surfaces. The emulsion which collects behind the rotor may either be drawn off or fed back into the feed hopper for re-circulation. The clearance between the rotor and stator can be varied by adjustment of worm gear mechanism which advances or withdraws the rotor.

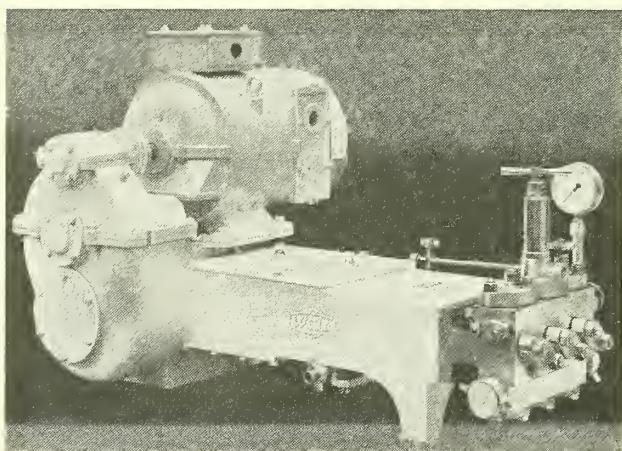
Homogenisers

Homogenisers, as distinct from colloid mills, are used mainly for improving the dispersion of the globules in a preformed emulsion, containing globules of widely varying sizes, by reducing the globules to approximately the same small dimensions. A well-homogenised emulsion will have most of the globules below 2μ ($1\mu = 0.001$ mm.). The possibility of obtaining this increased dispersion in an emulsion by forcing it at high pressure through a small orifice was recognised towards the end of the last century, and many different types of orifice have been proposed, but that most used at the present day consists of a valve held on to a seating by means of a heavy spring. The emulsion is forced through the valve at a high uniform pressure, which may be between 1,000 and 4,000 lb. per square inch, and since the valve only lifts a few thousandths of an inch, the emulsion passes out at a very high velocity and is subjected to very intense shearing forces. Most homogenisers consist of a three-throw pump system, which delivers the emulsion at a substantially uniform pressure. Each of the three cylinders is fitted with two valves, an inlet valve which communicates with the feed duct, and an outlet valve through which the emulsion passes to a delivery duct and the homogenising valve. The pressure can be measured with a pressure gauge of the conventional type, but a needle valve, between the gauge and the machine, is used to damp the pressure fluctuations and thus prevent damage to the gauge. Alternatively an ammeter in series with the electric motor driving the homogeniser can be calibrated to give the working pressure as the current (power) consumption increases uniformly with the homogenising pressure. Volumetric pressure gauges, both of the indicating and recording type, are now coming into use. The volumetric pressure gauge consists of a stainless steel bulb containing mercury, which is connected through metal capillary tubing to the gauge, and as the pressure on the bulb, which is connected to the homogeniser, varies, so the variations are communicated through the capillary to the gauge. The whole system is compensated for temperature variations. When viscous emulsions are homogenised it is usually advisable to feed the emulsion to the homogeniser under pressure, as the pistons may be receding in the cylinder on the intake stroke faster than the emulsion can flow in through the inlet valves, and the vacuum pocket which will then be formed will not only reduce the output of the homogeniser but will give rise to excessive fluctuations in the pressure of the emulsion fed to the homogenising valve. The globules of the emulsion leaving the homogenising valve may be clustered together, and in order to break down these clusters it is usual to pass the emulsion through a second valve at a much lower pressure (500 lb. per square inch). This two-stage homogenisation may be effected in the valve itself if some



Premier Paste Mill for viscous materials (Premier Colloid Mills, Ltd.)

restriction following the actual orifice results in sufficient high-pressure gradient. A feature of the Weir homogeniser is the absence of plunger packing, which eliminates the possibility of contamination of the product due to contact with absorbent packing materials. The plungers are fitted to long sleeves, and any leakage past them is returned to the suction line. The machine has been designed to facilitate dismantling for cleaning, and in the boring of the pump system consideration has been given to avoiding any corners where dirt could collect. The illustration shows model 3 A, which has a capacity of 200 to 400 gallons per hour, while the complete range of models vary in capacity from 15 to 1,250 gallons per hour. An unloading valve is provided which returns the emulsion to the supply tank when the machine is started up and is shut off



The Weir Homogeniser (G. & J. Weir, Ltd.)

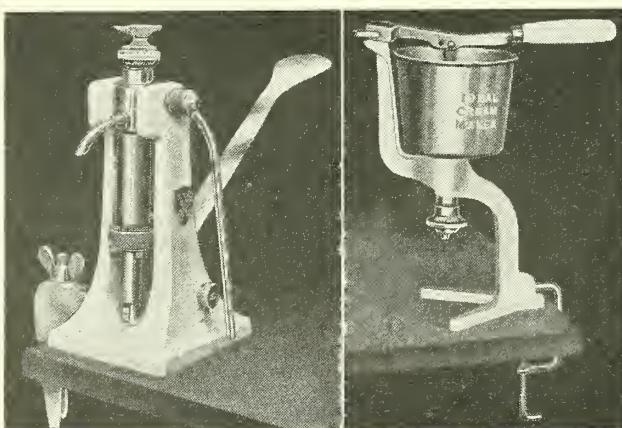
as soon as working speed has been attained. In certain cases, especially when viscous emulsions are being homogenised, the uniformity of the emulsion will depend on the rapidity of response of the valve to pressure fluctuations occurring in the emulsion fed to it, and the Brush Homogenising valve (Fig. 3, p. 252)—as fitted to the Brush Homogeniser—has been designed to meet this need. The valve consists of a metal tube B 2, carrying an homogenising face and a ring with two faces. As the spindle B 0 is screwed into the tube by means of the differential screw, pressure is obtained between the homogenising faces and the fixed face on the bush B 1. Emulsion is forced from the delivery ducts through the rings forming the homogenising faces. The valve spring is thus formed by the elasticity of the tube B 2 which, on account of its low inertia, will respond very readily to pressure fluctuations. The cylinder block has a system of air-venting which prevents the accumulation of any pockets of air during running. The Duo Visco Valve (Fig. 4,

p. 252) of the Cherry Burrell viscoliser, employs a breaker ring which serves to break down globule clusters leaving the homogenising valve, and thus effects two stages of homogenisation in the single valve. A pressure fall of 400-600 lb. per square inch is obtained through the breaker ring, and this should be added on to the homogenising pressure required in the first stage to give the total pressure. The viscoliser is of very robust construction, and the generous dimensions of the inlet and outlet valves to the cylinders assist in the efficient running of the pump system. The Impulsor homogeniser (Fig. 5) is interesting in that it employs only a single cylinder pump to feed the emulsion to the homogenising valve, which is of the conventional spring-loaded type. Two inlet valves are provided so that if necessary the two phases of the emulsion can be fed in separately. The plunger, which works at 275 strokes per minute, is of smaller diameter than the cylinder, so that at each stroke only one-ninth of the emulsion is forced out; the emulsion is, therefore, subjected, on an average, to nine compression cycles before being ejected, and it is claimed that this plays a large part in the efficiency of the homogeniser. Among other well-known homogenisers are the Alfa-Laval, Peter Brotherhood, Jensen, and Rannie.

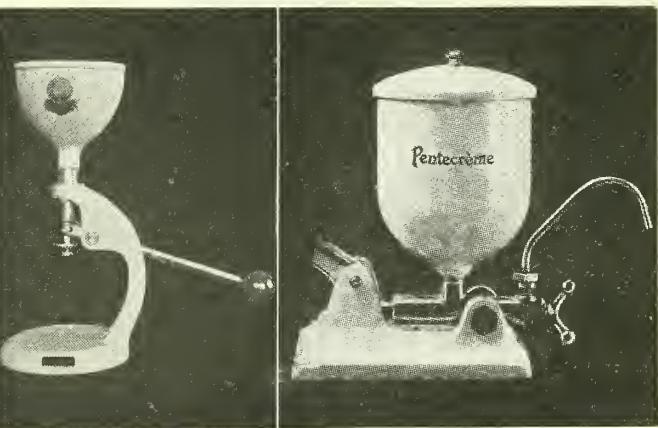
Laboratory Emulsifying Machines

It is frequently necessary to prepare experimental batches of emulsions on a laboratory scale, and for this purpose the smallest sizes of the industrial machines will be found most suitable, but where batches of about a pint only are required the machines sold for the home preparation of cream from milk and butter will be found to give excellent results, and some of these machines are capable of providing really good emulsion. In most cases the emulsion is pumped through a fixed orifice and machines giving "homogenising" pressure of 500-1,000 lb. per square inch for 25 lb. pressure on the handle can be obtained. The Pentacreme hand-operated emulsifier below is very solidly constructed, and the homogenising orifice consists in three V slots cut across the threads of a bolt screwed into the end of the cylinder, this system showing no tendency to become blocked during working. The Q.P. Laboratory emulsifier below was designed specially for laboratory use and the orifice is situated in the piston itself, which works in a cylinder fixed beneath the bowl. For further details regarding emulsifying machines "Technical Aspects of Emulsions" (A. Harvey, 17 Market Street, London, S.E.1, 6s.) may be consulted, and for a complete account of the preparation and properties of emulsions, Clayton's "The Theory of Emulsions and Their Technical Treatment" (3rd edition, Churchill, 25s.). Before a mixer or agitator is adopted for a particular emulsion, it is desirable to try it out in the testing laboratory on the particular preparation to be manufactured. It often happens that the stability and rapidity of formation of the emulsion is intimately affected by the time, type and speed of stirring. Then, too, certain emulsions will foam or aerate during their making, thus retarding the formation of a stable emulsion. The selection of the proper type of agitators will evade much of these difficulties.

EMULSIFYING MACHINES SUITABLE FOR THE LABORATORY OR THE DISPENSING COUNTER



The Dariekream, by Smith & Sons (Stoke Newington), Ltd.



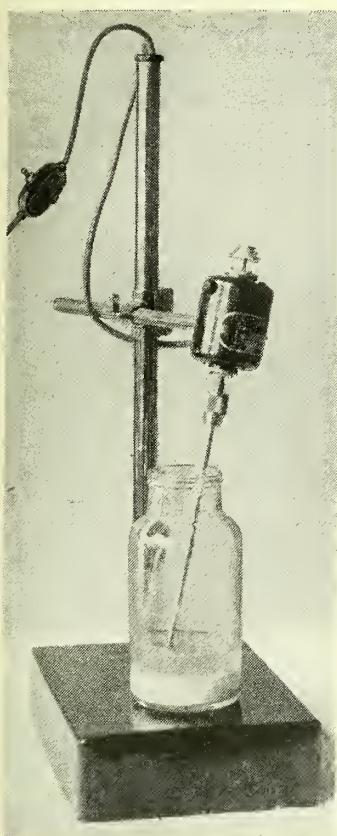
The Ideal, by William Facks & Co. (Sales), Ltd.

The Q.P. Emulsifier, by Ormerod Engineers, Ltd.

The Pentacreme by Pentesales (B. Harding, Ltd.)

Notes on Some Small-scale Apparatus

A Laboratory Mixer



Electrically-driven laboratory mixing unit by L. A. Mitchell, Ltd.

to be used. Solutions in their final containers, sealed, are maintained at a temperature of 80° C. for a period of sixty minutes on each of three successive days. The process, known as tyndallisation, is insufficient to kill spores of micro-organisms, but encourages their germination and subsequent destruction.

Dry-sealing Cachet Machine

In the dry-sealing method of cachet-making the cachet bases fit into and are held by small holes in the machine base and the tops into the lower surface of the machine head, as in the wet-sealing method. The trays through which the powder is "fed" are detachable and pressure between base and top of machine is applied against a spring. The sealing of the cachet is instantaneous and complete.



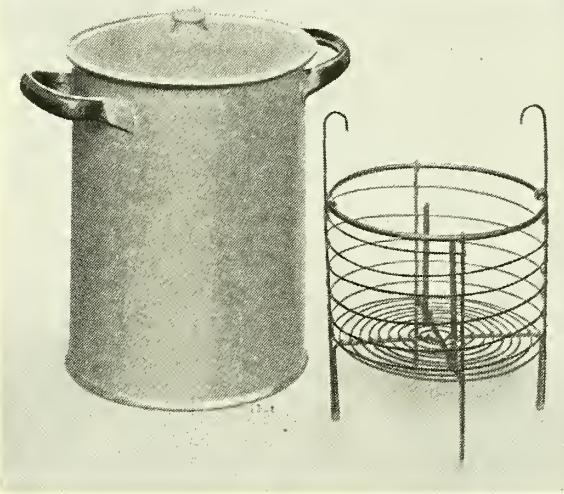
Sankey autoclave supplied by Britton, Malcolm & Waymark, Ltd.

THIS miniature electrically-driven laboratory mixing unit shown on this page embodies the principle of high speed revolution of a small propellor, as now widely applied in chemical manufacture. The motor has a horse-power of one-twentieth or one-sixtieth and a variable speed control. Spindle and propellor are usually of stainless steel; the motor is totally enclosed and can be clamped at any required height to a pillar on stand.

Autoclave and Tyndalliser

The autoclave is primarily used for the sterilisation of injection solutions or suspensions not injured by being subjected to a temperature up to 115° C. In the type illustrated, water to a depth of about one inch is inserted, the material to be sterilised supported above it upon a wire basket, and the lid clamped on. Pressure is maintained at 10 lb., corresponding to an internal temperature of 115° C., for half an hour, or more according to the quantity of liquid to be sterilised. The small steam steriliser illustrated is intended for solutions not immediately

Among other apparatus likely to be useful in the dispensary, or in businesses where a considerable business is done in pharmaceutical specialities, may be mentioned the Auto still, a hand-operated sugar-coater and a pressure suppository machine. A simple form of the Auto still is adapted to gas heating. The water passes through rubber tubing to the bottom of the worm tank and overflows in quantity corre-

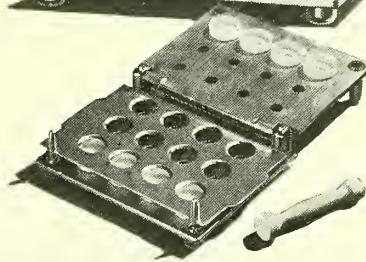


(Above) Steam steriliser for dispensary use.

(Right) Dry-sealing cachet machine, shown closed with cachets in position for final pressure and open for filling.



(Below) Cachets of the kind produced in the dry-sealing cachet machine. Britton, Malcolm & Waymark, Ltd.



sponding to the amount distilled, being automatically replaced by the drawing of further water into the still. The yield of an Auto still of this type issued by Bennett, Sons & Shears, Ltd., is half a gallon per hour; the apparatus is extremely compact.

In a hand-operated sugar-coater (J. W. Pindar & Co.) prepared syrup is poured over the pills or tablets requiring to be coated. A second and subsequent coatings are similarly applied as found to be necessary. Polishing is effected in a rotating copper pan lined with paraffin wax.

A suppository machine by the same makers is constructed for the manufacture in relatively small quantities by a cold-compression method of suppositories having a theobroma basis. After a homogeneous mass has been prepared it is fed to the machine and forced into the moulds by turning a pressure-wheel. The "finish" of the compressed suppository is achieved by adjustment of the pressure exerted on the mass. The machine is designed to take moulds of various shapes.

Lighting for Manufacture

The lighting of retail shop premises has been considered in recent issues of "The Chemist and Druggist." The illumination of factories, laboratories and offices is governed by different standards, which are discussed below.

PRODUCTION increases of from 5 to 60 per cent. have been obtained by installation of improved factory lighting systems. Accidents, too, have decreased. Since the cost of installing a correct system seldom exceeds 2 per cent. of the total pay-roll during its normal lifetime, it is surprising that factories still exist where a daylight intensity of fifty to one hundred foot-candles gives place to an artificial illumination of only two. Efficient illumination by no means corresponds with the brilliance of visible light sources, which, in fact, often hinder vision by setting up acute conditions of glare. In general, drop pendants with shallow reflectors or without shades should be superseded by a system of overhead fittings. Recorded investigations make it possible to predetermine the performance of any lighting system. Values for various processes have been calculated, subject to revision as more data becomes available. For factories with "saw-tooth" roofs, standard dispersive reflectors housing electric lamps of high wattage should be mounted with a spacing equal to one and a half times the mounting height above the working plane. This system results in an even distribution of light. An intensity of eight foot-candles was adopted here. Modifications to the open type of reflector are advisable where excessive dust is present; the provision of dust visors facilitates cleaning and prevents dust collection on lamp terminals. In corrosive atmospheres care should be taken to use corrosive-proof fittings, otherwise rapid deterioration of shade, lamp parts and cabling takes place. In an illustration on the facing page a general overhead system grouped with respect to the machinery rather than to floor area is shown. Whilst not advisable for general practice on account of heavy contrasts, deep shadows, etc., it ensures sufficient light on the machines without concentrating reflectors on each.

Indirect Lighting

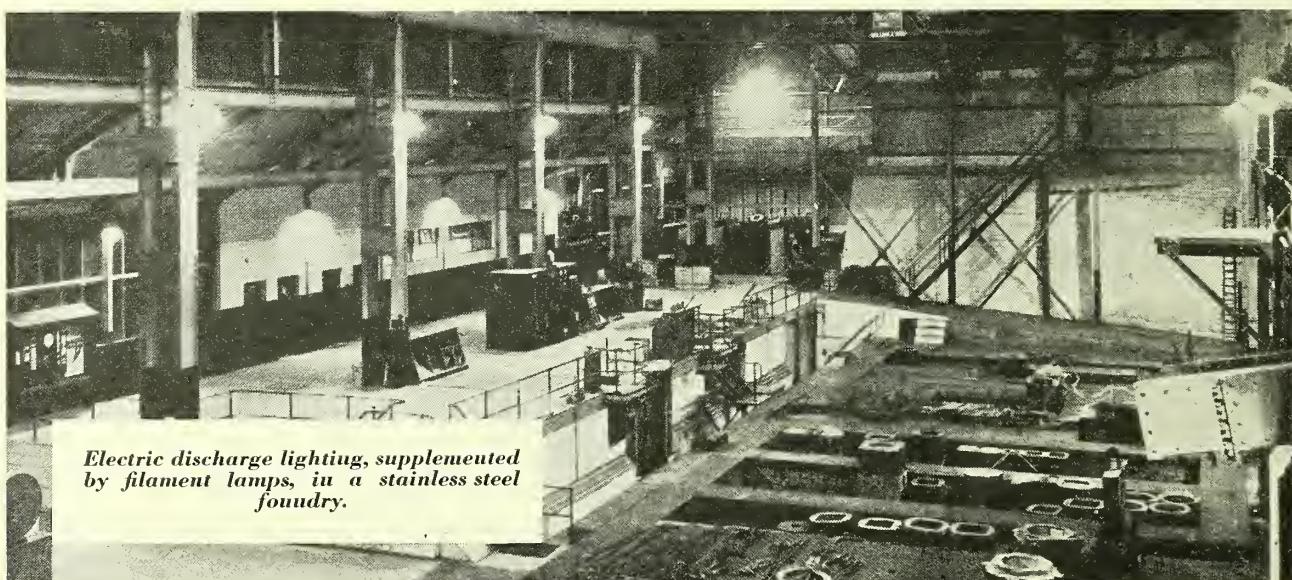
In multi-storied factories, reflectors which allow a small percentage of light to creep in an upward direction are found to be beneficial. It is claimed that there is a distinct psychological benefit, since the depression caused by darkness overhead is removed. Where it is desired to minimise shadow a diffusing globe is fitted into the reflector giving a light source of even surface brightness. The use of the "daylight blue" lamp is advantageous where colour discrimination is necessary; spacing should be identical with that of the dispersive type of fitting. In offices a system of general diffused lighting finds favour because it materially reduces shadows and evenly dis-

tributes light in all directions. Illumination given on the working plane should be about twelve foot-candles. A system of indirect lighting in use in a packing department is illustrated at the head of the next page. The layout of the plant, demanding illumination at various heights, makes a general overhead or a directional system undesirable. The roof interior has been coated with white paint to act as a reflector, the light being projected on to it by means of special fittings and redistributed over the working planes. The resulting illumination is extremely soft in character and almost shadowless. Absorption entailed in the system sometimes makes it uneconomical.

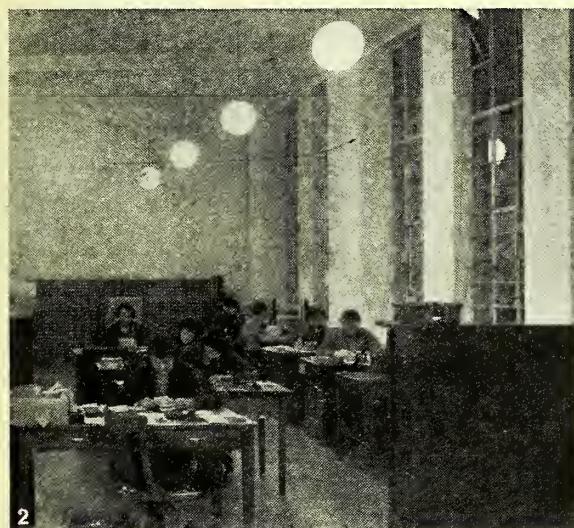
Electric Discharge Lamps

Development of light sources has been extremely rapid during the last quarter of a century. In 1910, for example, the vacuum tungsten lamp was introduced. The gasfilled lamp of 1914 provided more light for the same current consumption. The modern "coiled-coil" lamp enables still higher efficiencies to be obtained. Coiled-coil lamps of forty, sixty, seventy-five and one hundred watts, sold at the same price as the original single-coil lamps, show increased light efficiencies of 20 per cent., 15 per cent., 12½ per cent. and 10 per cent. respectively.

In many cases where general overhead lighting is employed the recently introduced electric discharge lamps are finding an application. The running costs of these lamps are considerably less than those of the ordinary incandescent type, whilst there is also a large increase in light output. The colour and quality of the light has proved a marked advantage where keen perception is necessary, as in the handling and inspection of metals and minerals. An apparent flicker in this type of lighting is apt to make rapidly moving machinery appear to move more slowly than is actually the case. Unless the machinery is adequately guarded it is therefore advisable to have a practical test as to suitability before installing this lighting system. Recent developments have placed on the market lamps which reduce the colour distortion present in the original discharge lamps. The colour correction certainly involves loss of efficiency, but it is claimed that the lamps have still approximately twice the efficiency of the comparable tungsten type. In the steel foundry illustrated, tungsten lighting is mixed with high-pressure discharge lighting, resulting, it is claimed, in complete elimination of colour troubles while maintaining high efficiency. Lamps now supplied combine this principle in one unit.



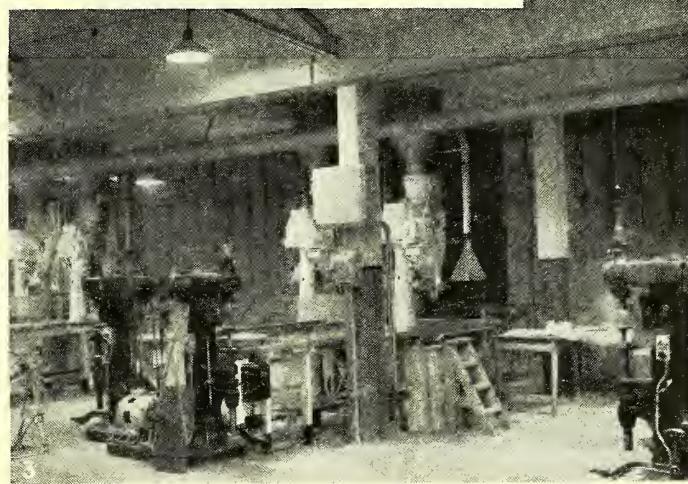
Electric discharge lighting, supplemented by filament lamps, in a stainless steel foundry.



2

Lighting Systems

for Factory, Office and Laboratory



1. An indirect lighting system adopted where visibility at different levels was essential. Light is projected on to a white-painted roof.



2. Even, glareless, direct lighting for an office. The beauty of the fittings is said to react beneficially on the workers.



3. Standard dispersive reflectors arranged with regard to the placement of machines. More commonly the lamps are placed at equal intervals.



4. Reflectors allowing leakage of light towards the ceiling; this results in more cheerful working conditions with little sacrifice of efficiency.

Stainless Steel

Its applications in chemical manufacture, in surgery and in retail pharmacy

THE patenting of the nickel-chromium austenitic steels by Pasel of Krupps in 1912 brought a valuable new metal to the service of the chemist. Not until the end of the Great War did it become available to industry, however. Since that time its value has been fully appreciated by the chemical industry and its use is being continually extended.

This type of stainless steel was quickly found capable of replacing more expensive metals in chemical processes, and has actually made possible the economical adoption in industry of certain chemical reactions otherwise impracticable. The early adoption of the metal on a wide scale suffered, as other new alloys have done, from production difficulties, but austenitic 18/8 steel and its variations are now available in many forms for fabrication, and a recent new development in melting technique has improved the alloys considerably, still further simplifying metal working processes. The term "austenitic 18/8" denotes an alloy of "austenite" containing 18 per cent. chromium and 8 per cent.



(Above) Staybrite stainless steel still, with cast-iron jacket, by Metal Propellers, Ltd.

(Left) Steriliser of Silver Fox stainless steel by Howard & Hill.

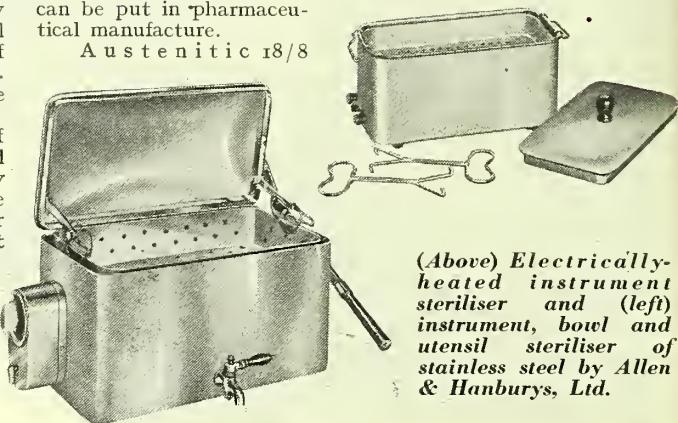
nickel. Austenite is a type of steel containing up to 1.7 per cent. of carbon dissolved in "gamma" iron, a non-magnetic allotrope of iron possessing a characteristic crystalline structure and characteristic reactions at high temperatures. There are other varieties of stainless steel. Indeed, the term is generally applied to all steel-coloured metals that are resistant to tarnishing, though strictly the alloy is not steel unless it hardens upon quenching. Austenitic 18/8 stainless steel is, however, by far the most important for pharmaceutical as for many other purposes.

Applications in Manufacture

Stainless steel is used largely in the manufacture of pharmaceutical preparations, drugs and alimentary products. Some of the largest manufacturing chemists have installed plant for storage and reaction vessels, including monjus tanks, steam-jacketed pans, autoclaves, packing and mixing tables, bottling and filling machines and conveyers. It has been adopted for vital parts of the machinery in many different processes, such as valves and valve seats, inlets, pipe lines, tablet punches and dies. The handling of mercuric chloride, previously fraught with great difficulties, serves as a good example of processes in which stainless steel has been of immense benefit. Shafts of stirring mechanisms, vacuum stills, filtering accessories, centrifuges, condensers, linings of ball mills, and ointment mixers show to what varied applications the metal

can be put in pharmaceutical manufacture.

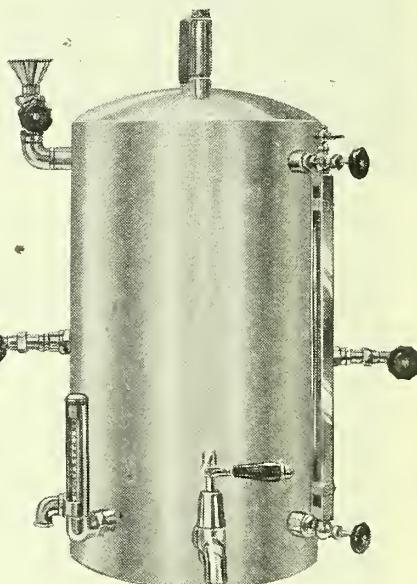
Austenitic 18/8



(Above) Electrically-heated instrument steriliser and (left) instrument, bowl and utensil steriliser of stainless steel by Allen & Hanburys, Ltd.

stainless steel is resistant to a very large range of chemicals, including nitric acid, the fatty acids, alkalis, most inorganic salts except certain compounds of the halogen acids, and the majority of organic compounds. In fact, its first use in the chemical industry was probably in the manufacture of nitric acid. In the evaporation and crystallisation of citric and tartaric acids; the purification of fatty acids; and similar processes, stainless steel has been invaluable. Its resistance to corrosion is increased by the addition of molybdenum, and one member of the "Silver Fox" group of steels containing about 3.5 per cent. molybdenum resists acetic acid at all concentrations and temperatures; is unattacked by sulphuric acid up to 15 per cent. strength by vol. at 60° C., and resists the concentrated acid up to 40° C.

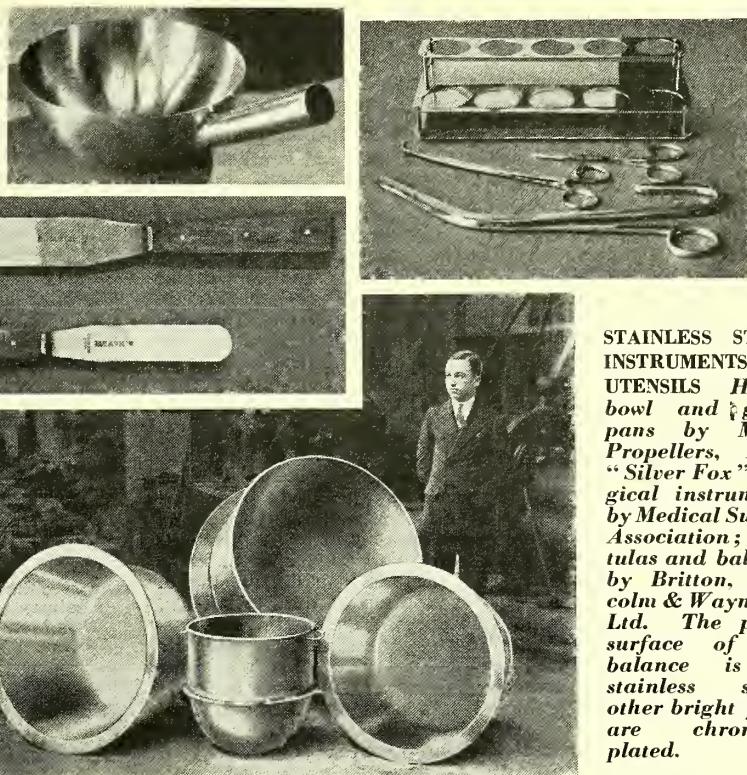
Perhaps the most noteworthy adoption of stainless steel has been by the surgical profession. Surgical and dental instruments and hospital fittings are now made almost entirely from stainless steel, and it may perhaps be said that the only factor preventing its universal adoption for such equipment is its relatively high cost. For making surgical instruments the austenitic stainless steels do not offer the mechanical properties required, and it is usual to employ one of the plain chromium stainless steels (containing about 1.3 per cent. chromium). These may be forged into shape and finally hardened and tempered to any required tensile strength within the range 40/100 tons per square inch. In surgery stainless steel is not only used for instruments, but has replaced the



Steam-heated water steriliser of stainless steel, for destruction of bacteria and spores at 240° F. and 10 lbs. pressure, by Allen & Hanburys, Ltd.

precious metals in operations such as trepanning. It is being adopted, slowly but surely, for dental plates and fittings.

Apart from its strictly utilitarian value, stainless steel is a distinctly ornamental metal and is used extensively for interior shop fittings and outside decoration. To yield its full decorative value, it needs to be used discreetly; but in combination with black or clear plate glass the effect of stainless fittings in a pharmacy is particularly pleasing. In exteriors, it was early found to have the great advantage of natural



STAINLESS STEEL INSTRUMENTS AND UTENSILS Hand-bowl and giant pans by Metal Propellers, Ltd.; "Silver Fox" surgical instruments by Medical Supply Association; spatulas and balance by Britton, Malcolm & Waymark, Ltd. The plane surface of the balance is of stainless steel; other bright parts are chromium plated.

and permanent finish; chromium plating had proved itself unable to stand up to prolonged harsh weather conditions. In interiors it is used in many ways. Sometimes large areas, covered with sheet stainless steel, of matt finish, are relieved by mouldings, rims and borders of highly polished finish.

Instead of the high contrast of bright metal against jet black, intermediate shades of grey may be introduced by spraying to different degrees of opacity with a black paint. Alternatively, pleasing decorative effects have been obtained by the restrained use of vivid colours. Stainless steel lends itself to etching and sandblasting treatments with agreeable results. Inside the pharmacy, stainless steel is becoming increasingly adopted as the material from which dispensary sinks are made.

Every pharmacist should be familiar with its characteristics and possibilities and cater for the demand for stainless accessories on the part of medical practitioners and the general public. The articles illustrated must be taken simply as representative of the varied applications of this material. For example, the range of surgical instruments,

and includes scissors, knives, probes, scalpels and many others. In the dispensary, stainless steel spatulas are the most obvious application. A warning is not out of place that their properties, though similar, are not identical with those of ordinary steel spatulas. The principal direction in which this is demonstrated is in their lesser flexibility. They are inevitably more brittle and cannot, for example, be so freely used in accommodating themselves to the shape of a mortar for removal of ointments after trituration. Stainless spatulas have, however, such obvious advantages that this disadvantage is outweighed. The handbowl and large pans illustrated demonstrate how easily, with this metal, a practical and strong utensil is obtained without rims, grooves or rivets to entrap substances capable of harbouring bacteria. It is only necessary to picture the handbowl as constructed in aluminium instead of steel to realise the relative increase in strength resulting from the use of the newer metal.

Chemical Engineering Congress

The Chemical Engineering Congress of the World Power Conference will be held at the Central Hall, Westminster, London, S.W.1, from June 22 to 27. Papers, varying in number from eight to twelve in each group, will be given under the following headings: A, Ferrous Metals in Chemical Plant Construction; B, Refractories, Rubber, Plastics and Other Materials in Chemical Plant Construction; C, Separation; D, Size Reduction, Grading and Mixing; Electrolysis and Electrical Applications; E, Destructive Distillations; F, Treatment and Disposal of Effluents and Waste Materials; Lubrication; G, High Pressure Reactions and High Vacua; H, Heat Exchange; J, Education and Training; K, Statistics, Administration; Safety and Welfare; L, Trend of Development; M, General Aspects.

The official opening will take place in the afternoon of June 22, followed in the evening by a reception. Social events connected with the Congress will include visits to works; a banquet; and receptions. An exhibition of chemical plant, organised by the British Chemical Plant Manufacturers' Association, 166 Piccadilly, London, W.1 (to which application for space should be made), will be held concurrently with the Congress.

Steam-jacketed pan with lining of Silver Fox stainless steel.

apart from the examples of forceps shown, is almost limitless,

Magnesium Trisilicate

A STUDY of magnesium silicates as antacids and as adsorbents is contributed to recent issues of "The British Medical Journal" (3916-3918) by Dr. N. Mutch. In his opening paragraphs the author gives a table of sixteen natural and synthetic silicates, excluding hexa- or higher silicates and double salts.

ACID NEUTRALISATION.—Several experiments were carried out for the purpose of determining the relative strengths of various silicates in relation to hydrochloric acid, the time taken for completing the reaction, and so forth. The conclusions drawn are:—(1) Certain hydrated silicates of magnesium possess strong antacid properties. (2) The power of neutralising weak acids attains its maximum in the trisilicates. (3) The initial phases of the reaction are quick, but several hours are required for the completion. (4) Within the clinical range of acidities neutralisation proceeds more quickly at high acidities than at low ones.

ADSORPTION.—The adsorptive action of the silicates was investigated in various directions. Methylene blue in distilled water at 20° C was apparently the first of the dyes tried, and afterwards more than twenty other dyes were used. It is stated in the monograph that quantitative data alone do not give any true indication of the relative adsorptive powers of different substances. It is necessary to know their qualitative range. This problem was investigated in relation to dyes, alkaloids, toxins, ferments, and other substances. The findings are:—(1) Synthetic hydrated trisilicate of magnesium exhibits powerful adsorbent qualities. At the saturation point for methylene blue it is seventeen times as active as colloidal kaolin (room temperature), and at body temperature the disparity is even greater. (2) Its immediate adsorptive activity is considerable, but several days are required for saturation. (3) The range of its adsorptive affinities covers a great variety of substances, including acid and basic dyes, alkaloids, bacterial toxins, putrefactive amines, and food poisons. (4) Adsorption is selective, and a decided preferential affinity was noted for basic dyes—both crystalloid and colloid. It did not adsorb the poison of *Amanita phalloides* ("mushroom" poison), but readily removed muscarine ("mushroom" poison) and Müller's mussel poison from aqueous solution.

Clinical Uses

The author has selected, after experiments, synthetic magnesium trisilicate, $Mg_2Si_3O_8 \cdot nH_2O$, as the most effective of the silicates of magnesium from a therapeutic point of view. Subject to a small correction, the total antacid effect can be calculated as equivalent to the magnesium content of the silicate. From the clinical view-point it is the slowness of the reaction which is of the greater interest. The duration of useful antacid action is approximately equal to that required for gastric digestion and to the usual interval between successive meals. The trisilicate thus offers the possibility of a sustained antacid therapy on a reasonably spaced system of dosage. Hydrated silica is produced by its interaction with the gastric juice, and is itself a powerful adsorbent for many substances, including shell-fish poison and pepsin. The pepsin so adsorbed is still available for the purposes of digestion. In the small intestine the contents are subjected to the combined adsorptive action of hydrated silica and a proportion of unsplit magnesium trisilicate. The adsorptive affinities of the latter cannot be exhausted quickly, and should therefore be available throughout the whole of the intestinal tract. In fifteen cases of chronic peptic ulceration the dosage of magnesium trisilicate was kept low in the hope that a sufficient acid-free and pepsin-free zone might be established locally in the ulcer crater, without there being any necessity to neutralise the gastric contents as a whole. The clinical results were encouraging. In order to test its action in excessive quantities, single doses varying from 1 drachm to 1 ounce of the parent powder were given to twelve volunteers without the production of any kind of symptom. Daily doses were then given over a period of a month as follows:—Four received 1 drachm daily; four received 2 drachms daily; and four received 3 drachms daily in divided doses for three consecutive weeks. There was no modification of appetite, digestion, bowel action, or of the consistency of the stools. There were no objective signs of disturbance, and no malaise or other subjective symptoms of ill health.

Trade-Mark Applications

The figures in parentheses refer to the classes in which the marks are grouped. A list of classes and particulars as to registration are given in "The Chemist and Druggist Diary and Year-Book," 1936, p. 322.

(From "The Trade Marks Journal," February 5, 1936.)

- "EULKYL"; for phenylethyl esters of hydrocarpus oil (3).
- "STYPVEN"; for medicinal chemicals (3). By The Wellcome Foundation, Ltd., 67 Holborn Viaduct, London, E.C.1. 564,670/565,888.
- "GERMOLOIDS"; for all goods (48). By The Veno Drug Co., Ltd., Chester Road, Manchester, S.W. 565,323. (Associated.)
- "PICTODENT"; for tooth-paste (48). By K. Schmeidler, 7 Idol Lane, London, E.C.3. 565,395.
- "PEFL-OS-STAR"; for dentifrices (48). By Bird & Storey, Ltd., 1 Marble Arch, London, W.1. 565,396.
- "ROBERTA"; for perfumery, etc. (48). By Cussons, Sons & Co., Ltd., Moor Lane, Kersal, Manchester. 565,612.
- "PERMA-GRIP PRO-PHY-LAC-TIC TOOTH BRUSH" on label design incorporating tooth brush; for tooth brushes (50). By The Pro-Phy-Lac-Tic Brush Co., 221 Pine Street, Florence, Massachusetts, U.S.A. 562,151/152. (Associated.)

APPLICATION AMENDMENT

The specification for "Noxco" in Class 3, No. 561,819, by Knox Laboratories, Ltd., 81 Lamb's Conduit Street, London, W.C.1, has been amended to exclude soap and preparations for treating corns.

(From "The Trade Marks Journal," February 12, 1936.)

- "NORAL"; for chemicals (1). By Northern Aluminium Co., Ltd., Bush House, Aldwych, London, W.C.2. 562,563. (Associated.)
- "ATOMAL"; for photographic developers (1). By I.G. Farbenindustrie A.-G., Grünburgplatz, Frankfurt-a/M., Germany. 565,563.
- "TORNOL" and "TORNULOSE"; for chemicals (1). By Naamloze Vennootschap Pieter Schoen & Zoon, Oostzijde 41, Zaandam, Holland. 565,702. (Associated.)
- "ASLIX"; for insect and vermin destroyers (2). By W. Aslin, 20 Bangor Street, Hulme, Manchester, 15. 565,175.
- "SEEDOLIN"; for chemicals (2). By See-Edolin Co., Ltd., Rutland Road, Hammersmith, London, W.6. 565,180. (Associated.)
- "RHODOQUINE"; for medicinal compounds containing derivatives of quinoline (3). By Société des Usines Chimiques Rhône-Poulenc, 21 rue Jean-Goujon, Paris (8e), France. 551,134. (Associated.)
- "PULMAROL"; for medicinal chemicals (3). By Boots, Ltd., 37 Station Street, Nottingham. 556,970.
- Design of man holding elephant; for medicated infants' and invalids' foods (3). By B. Askew, Samson Health Product Co., 557 Great Horton Road, Bradford. 564,183.
- "CUSEMI"; for medicinal chemicals (3) and for cosmetic preparations and skin creams (48). By Böhme Fettchemie G.m.b.H., Moritzstr. 25-33, Chemnitz, Saxony. 561,380/391. (Associated.)
- "VISSORELMS"; for medicinal chemicals for internal use (3). "ENSOCAPS"; for medicinal chemicals (3). By Dr. Hugo Remmler A.-G., 38 Anklamerstr., Berlin. 564,946/565,786.
- "VINESTHENE"; for medicinal chemicals (3). By May & Baker, Ltd., 42/43 St. Paul's Churchyard, London, E.C.4. 564,955.
- "LAXIPRIN"; for laxative medicines (3). By J. Bell, Hills & Lucas, Ltd., 14 Tower Bridge Road, London, S.E.1. 564,323.
- "MARTOLOIDS"; for medicinal chemicals (3). "MARTOLIA"; for all goods (3) and for perfumery, etc. (48). "MARTOLINE"; for hair wash and hair cream (48). By L. Martyn, Ltd., 34 Dalston Lane, London, E.8. 565,428/429/430/431. (Associated.)
- "CHEMEX"; for surgical instruments, etc. (11). By T. Horton, High Street, Merthyr Tydfil, Glam. 565,762.
- "LIVE" on circular design of hand holding tumbler ("Live" disclaimed). By Vita Products, Ltd., 39-45 Finsbury Square, London, E.C.2. 564,383.
- "LIFEFUOY"; for confectionery (42). By Anglo-American Chewing Gum, Ltd., 165 Blackfriars Road, London, S.E.1. 565,506.
- "ZAVEE"; for food substances (42). By F. W. Hampshire & Co., Ltd., Sinfon Lane, Derby. 565,547. (Associated.)
- "GLANVEG"; for food substances (42). By Modern Health Products, Ltd., 38 Langham Street, London, W.1. 565,458.
- "LYNDAX"; for perfumery, etc. (48). By W. Lynd & Co. (1929), Ltd., 14 Dock Street, Leeds, 10. 565,266. (Associated.)
- "RECREATION"; for perfumes (48). By Parfumerie Houibant, S.A., 19 rue du Faubourg Saint-Honoré, Paris. 561,582.
- "EVEIL"; for perfumery, etc. (48). By Bienaimé, S.A., 7 rue Ancelle, Neuilly-sur-Seine, France. 565,314.

Trade Report

Where possible scales of prices of chemicals are given for bulk down to small quantities. Prices recorded for crude drugs, essential and fixed oils and coal tar products are for fair sized wholesale quantities. Qualities of chemicals, drugs, essential and fixed oils, etc., vary, and selected brands or grades would be at higher values

28 Essex Street, W.C.2, February 27

GENERAL BUSINESS seems to have been on a little better scale this week, but there are still a number of markets that are distinctly quiet. Unsettled political conditions in various parts of the world tend to destroy confidence in markets, and most business is of the hand-to-mouth type. In the PHARMACEUTICAL CHEMICALS markets the chief alteration in prices is a substantial reduction in METHYL SALICYLATE by the home makers. As recently reported, this market has been unsettled owing to very severe competition from imported material. There are a number of other imported products which are still quoted here at cut prices, but most of these are not produced here. Second-hand holders of SANTONIN are now offering at cheap prices, appearing to wish to force sales. The volume of business generally seems to have been a little better this week, but it is still hardly up to average.

Crude Drugs

A range of these products continues in good demand, with values keeping fully steady. A revival in demand from the Continent for immediate shipment is noted. Spot AGAR has been called for from the Continent. Japan reports partial failure of the Yokohama crop. Good business in BARBASCO ROOT. Little interest in BUCHU and very few shipment offers of new crop. The demand for CARDAMOMS at this week's sale was brisk, as anticipated, and increased prices were obtained. CASCARA SAGRADA is fully steady, but quiet. British COPPER LIVER OIL is reported to be quoted cheaper. A good demand for DERRIS ROOT this week; spot stocks low. Spanish and Portuguese ERGOT is firm, but neglected; the Russian product is easier and unsteady. GENTIAN continues in steady demand. Fair sales of GUAIACUM are reported. Sudan GUM ACACIA is steadier and values have recovered. Matto Grosso IPECAUANHA continues to sell well at full prices. MENTHOL has been an active market; values have advanced and the market continues firm. Spanish MERCURY is reported to be selling actively in all markets. Florentine ORRIS ROOT is dearer on short spot supply. There has been a steady demand for the parcels of new crop hand-picked Alexandrian SENNA PODS. SHELLAC shows a recovery. Better sales of Para TONKA BEANS. WAXES are steady, but rather quiet.

Essential Oils

Moderate business is being done in these products, with values keeping up fairly well. Spot supplies of STAR (ANISE) are running very low and a further advance is recorded, closing firm; no shipment offers. BERGAMOT is firmly held on spot; no further reliable news on the new Consortium. Java CITRONELLA is steadier for shipment, but business is slow. Bourbon GERANIUM is steadier, spot and forward. Some shippers of French LAVENDER have reduced their quotations; spot offers are irregular, according to quality of the oil. Sicilian hand-pressed LEMON has been rather quiet, but spot values are keeping firm. Quotations for the Californian oils are also unchanged, but supplies on spot are negligible. LEMONGRASS is a little steadier for shipment and business has improved. Arrivals of new crop French GUINEA ORANGE are delayed owing to the strike at Marseilles docks. Singapore and Seychelles PATCHOULI firm on spot, with nothing offered forward. Good business in Japanese PEPPERMINT; the market is firm at the further advance, and shippers' cables indicate a strong position at the source.

Exchange Rates on London

THE following is a list of the chief Continental and other exchange rates at the opening on Thursday morning:

Centre	Quoted	Par	February 27	Value of the £
Amsterdam ...	Fl. to £	12·107	7·27½	12/0½
Berlin ...	Mks. to £	20·43	12·29	12/0½
Brussels ...	Belgas to £	nominal	29·32	16/9
Copenhagen ...	Kr. to £	18·159	22·40	24/8
Lisbon ...	Esc. to £	110	109½	19/11½
Madrid ...	Ptas. to £	25·22½	36·16	28/5
Milan ...	Lire to £	92·46	62½	13/5½
Montreal ...	Dol. to £	4·86½	4·98½	20/6½
New York ...	Dol. to £	nominal	4·99½	20/6½
Oslo ...	Kr. to £	18·159	19·90½	21/11
Paris ...	Fr. to £	124·21	74·33	12/0½
Prague ...	Kr. to £	164·25	119	12/0½
Stockholm ...	Kr. to £	18·159	19·39½	21/4
Warsaw ...	Zloty to £	43·38	26½	12/0½
Zurich ...	Fr. to £	25·2115	15·10	12/0½

Bank rate 2 per cent.

Pharmaceutical Chemicals, etc.

THERE are indications of a little better general inquiry this week. Quotations for a number of products continued very competitive. Methyl salicylate has been reduced. Santonin is offering much below Convention prices.

BISMUTH SALTS.—A rather quiet demand, with makers' prices keeping steady. Carbonate, less than one cwt., 6s. 6d.; 28 lb., 6s. 9d.; 8 lb., 7s. 3d.; less than 8 lb., 8s. 6d. per lb.

BROMIDES.—Makers' prices about steady, fair business: Ammonium, not less than five cwt., 1s. 9d.; one cwt., 1s. 10d.; smaller quantities, 2s. 5d. per lb.; potassium, B.P. crystals and granular, not less than 5 cwt., 1s. 6d.; one cwt., 1s. 7d.; 28 lb., 1s. 10d.; smaller quantities, 2s. 2d. per lb.; sodium, B.P., not less than five cwt., 1s. 8d.; one cwt., 1s. 9d.; 28 lb., 2s.; smaller quantities, 2s. 4d. per lb., net, without engagement. Special prices for larger quantities.

CHLORAL HYDRATE.—Makers' prices for home trade fully steady: duty-paid crystals, in 14-lb. free containers, five cwt., 3s. 1d.; one cwt., 3s. 2d.; 28 lb., 3s. 3d.; 14 lb., 3s. 4½d. per lb.; 28-lb. jars, one penny per lb. extra.

CITRIC ACID (B.P. CRYSTALS).—Market continues steady, business average. British material quoted at 1s. per lb., less 5 per cent. discount, nominal and without engagement. Dealers' prices for imported material are competitive.

CREAM OF TARTAR.—Business rather quiet, quoted unchanged. British material, 99 to 100 per cent., 79s. per cwt., less 2½ per cent. discount. Dealers' prices for foreign material competitive.

LACTIC ACID (B.P.).—Business on good scale, market fairly steady: quantities in carboys, 1s. 4d. to 1s. 5d.; in winchesters and bottles, 1s. 6d. to 1s. 9d. per lb., as to quantity.

MERCIURIALS.—Makers' scales of prices for these salts are fully steady. Chloride, B.P., not less than one cwt., 4s. 11d.; less than one cwt., from 5s. per lb. upwards.

METHYL SALICYLATE.—Makers' prices have been reduced from 2d. per lb., to meet recent outside competition: spot, ten cwt., 1s. 2½d.; five cwt., 1s. 3d.; one cwt., 1s. 3½d.; 56 lb., 1s. 3½d.; small quantities, in bottles, up to 2s. per lb.

PHENACETIN.—Market continues steady at current low values: crystals or powder, bulk quantities, 2s. 6d. to 2s. 7d.; smaller parcels, 2s. 7½d. to 3s. per lb., as to quantity.

PHENAZONE.—Spot quotations are irregular, with isolated very low offers: crystals, five cwt., 8s. 9d.; two cwt., 9s. 0½d.; and less, 9s. 3d. per lb., with powder 2½d. per lb. extra.

PHENOLPHTHALEIN.—Rather competitive, business quiet: two cwt., 2s. 9d.; one cwt., 2s. 10d.; 28 lb., 3s.; 14 lb., 3s. 1d.; 7 lb., 3s. 2d.; smaller parcels, up to 3s. 6d. per lb.

POTASSIUM PERMANGANATE (B.P.).—Dealers' prices slightly cheaper and steady: quantities, in drums, 8½d. to 8¾d.; smaller quantities, from 9d. to 1s. per lb.

QUININE SALTS.—Convention scales of prices continue steady: business about normal; sulphate, 2s. 1d.; bisulphate, 2s. 1d.; ethyl carbonate, 2s. 8½d.; salicylate, 2s. 9½d.; hydrochlor., 2s. 7½d.; dihydrochloride, 2s. 10½d.; hydrobromide, 2s. 7½d.; bishydrobromide, 2s. 10½d.; valerenate, 3s. 7d.; hyposulphite, 3s. 10½d.; alkaloid, 2s. 11d. per oz., carriage paid on bulk quantities, 100-oz. tins free; smaller packing extra.

RESORCIN.—Prices for British material are steady: crystals, one cwt., 4s. 11d.; 56 lb., 5s.; 28 lb., 5s. 1d.; 14 lb., 5s. 3d.; 7 lb., 5s. 6d.; less than 7 lb., 6s. per lb.

SACCHARIN.—The Convention price for 550 is 37s. 6d. per lb., duty paid, with rebates for quantities.

SALICYLIC ACID (B.P.).—Quoted unchanged, market rather dull: five cwt., 1s. 7d.; one cwt., 1s. 7½d.; 28 lb., 1s. 8d.; 14 lb., 1s. 9d.; 7 lb., 1s. 10d.; 4 lb., 2s. per lb.

SANTONIN.—Some of the second-hand parcels are now being offered at very keen prices. No change in first-hand prices: not less than 50 kilos., £35 1s. 6d.; not less than 25 kilos., £36 1s.; not less than 10 kilos., £36 9s.; not less than 3 kilos., £36 17s.; not less than 1 kilo., £38 1s. 6d.; less than 1 kilo., £39 1s. 6d. Special prices are in operation for export to all markets.

SODIUM SALICYLATE (B.P.).—Makers' prices unchanged, market quiet: home trade, crystals or powder, five cwt., 1s. 8½d.; one cwt., 1s. 9d.; 28 lb., 2s.; 14 lb., 2s. 2d.; 7 lb., 2s. 3d.; 1 lb., 2s. 6d. per lb.

TARTARIC ACID (B.P. CRYSTALS).—Market is steady, fair inquiry: British makers quote at 1s. per lb., less 5 per cent. discount. Dealers offering foreign material at competitive prices.

Crude Drugs, etc.

ACONITE ROOT.—Dealers are offering small parcels of *Napellus* from 62s. 6d. to 65s. per cwt., spot.

AGAR.—Quite a fair demand for immediate shipment to the Continent, the home trade business has been slow. Japan reports Kobe crop about average, but Yokohama poor, and they are quoting level prices for both: spot, Kobe No. 1, 3s. 3d.; No. 2, 3s.; Yokohama No. 1, 3s. per lb.; shipment, Kobe, No. 1, 1s. 10*½*d.; No. 2, 1s. 9*½*d.; Yokohama No. 1, 1s. 10*½*d. per lb., c.i.f.

ALOES.—Market rather quiet, but values are keeping quite steady. Cape, spot, 52s. 6d. in boxes; 54s. 6d. in cases; shipment, boxes, 48s. 6d.; cases, 50s. per cwt., c.i.f. Curaçao, spot, 105s. to 110s.; shipment, from 100s. to 102s. 6d. per cwt., c.i.f.

ANTIMONY.—Chinese crude is quoted cheaper for shipment at £32, c.i.f. English regulus, £72 to £73, spot.

BALSAMS.—Business limited in size, market steady: *Tolu*, 1s. 6d.; *Canada*, 2s. 9d.; *Peru*, 5s. 4d. per lb., spot.

BARBASCO ROOT.—There has been a nice business passing, and spot stocks, particularly of the better quality root, are running very low. No shipment offers before April-May. Spot quoted at about 1s. 1*½*d. for 5 per cent. rotenone.

BELLADONNA.—Dealers' prices unchanged, business quiet. Leaves, 60s.; root, 52s. 6d. per cwt., spot.

BENZOIN.—Occasional business and prices are steadier, tending to recover. Some good seconds, from £5 10s. upwards, with thirds in the region of £4 15s. to £5 per cwt.

BUCHU.—Spot supplies continue small, the arrivals of new crop so far being negligible. Spot, rounds, 1s. 6d. to 1s. 7d. for old crop. Oval, new crop, smallish leaf, fair quality, 1s. 3d., and stalky at slightly less. Shipment offers have been few, with the price for this market indicated at 1s. 2d. per lb., c.i.f.

CANTHARIDES.—Occasional spot inquiry, quoted unchanged. Russian, 6s. 4*½*d. to 6s. 6d. Chinese, 2s. 1*½*d. to 2s. 3d. per lb., as to quantity, spot.

CARDAMOMS.—There was a brisk demand at the sale this week and all lots, except Pile 1 and 2, were cleared at full prices up to an advance of 4d. on recent prices. The demand from America for the best quality did not materialise and they were withdrawn with the limit indicated at 4s. 6d. and 3s. 6d. per lb., respectively. Inquiry is now being received for the unsold lots, and prices are being firmly maintained.

CASCARA SAGRADA.—Rather less business reported, but values are fully maintained. Spot 1932 peel, 56s.; 1933 peel, 54s.; 1934 peel, 52s.; 1935 peel, 50s. per cwt.; shipment, 1933 and 1934 peel, about 46s. and 1935 peel firm at 42s. 6d. per cwt., c.i.f.

CHAMOMILES.—A rather modest demand, with values keeping steady. Spot, white flowers, up to 130s.; medium, 115s.; mixed, about 105s. per cwt., ex store.

CLOVES.—Market remains rather quiet, with values keeping steady. Zanzibar, spot, 7*½*d.; shipment, February-March, 6*½*d. per lb., c.i.f. Madagascar, in bond, 6*½*d.; shipment, February-March, 6d. per lb., c.i.f.

The landings of Zanzibar in London during the week ended February 22 were nil and the deliveries 1, leaving a stock of 1,840. From January 1 to date the landings of Zanzibar have been 1,440 and the deliveries 657. Landings of Madagascar for the week ended February 22 were nil and the deliveries 8, leaving a stock of 1,111. From January 1 to date landings of Madagascar have been 200 and the deliveries 651 packages.

COCONUT (DESICCATED).—Business has been limited, values maintained: spot, fine, 25s. 3d.; medium, 25s. 3d. per cwt.; shipment, halves, February, 24s.; March, 23s. 6d.; April, 23s. 3d. per cwt., c.i.f.

COD-LIVER OIL.—Bergen reports Lofoten fishing results to February 22 were 19,441 tons of cod and 8,588 hectol. of oil, compared with 12,140 tons of cod and 6,965 hectol. of oil on the same date in 1935, and 13,679 tons of cod and 7,454 hectol. of oil in 1934. Exports up to February 22 totalled 9,049 barrels, compared with 9,261 in 1935 and 9,487 in 1934. Finest Lofoten steam refined medicinal oil, 83s. to 84s. per barrel, c.i.f., London; spot, in small lots, about 127s. 6d. per barrel, ex store, duty paid. Newfoundland, non-freezing medicinal oil, about 130s. per barrel, ex store. British non-freezing medicinal oil is now quoted at 95s. to 100s. per barrel, c.i.f., London, duty free, while quotations from another home source are at higher figures.

DAMIANA LEAVES.—Dealers are offering small parcels on spot, from 8d. to 9d. per lb. Demand quiet.

DANDELION ROOT.—The limited quantity of foreign root available on spot is firm at 82s. 6d. to 85s. per cwt.

DERRIS ROOT.—Business has been moving on a good scale this week and a good deal of the best quality root has been cleared. Market tends firmer, with values at 1*½*d. to 1s. 3d. per lb., as to test. Shipment, March-April, 17 per cent. ether extract, 9d., c.i.f.; 4 per cent. rotenone, 1s. 4d. per lb., c.i.f.

DIGITALIS LEAVES.—Occasional inquiry on spot, with dealers quoting 70s. to 72s. 6d. per cwt.

ERGOT.—Inquiry for Spanish and Portuguese has been negligible, but values, spot and forward, are firm at former figures. Russian is

moving down, and quotations at the moment are unsteady, with spot at anything from 3s. 10*½*d. to 4s. 3d., and shipment offers ranging from 3s. 7*½*d. to 3s. 10*½*d. per lb., c.i.f. Business has been of no importance, and the market is weak.

GENTIAN.—A fair demand continues and spot holders' prices are steady at 38s. to 40s. per cwt. for French root.

GINGER.—Market is firmer for West African, with values slightly dearer. West African, spot, 47s. 6d.; for arrival, 30s. 6d. per cwt., c.i.f. Jamaican, spot, bold in barrels, 96s. to 100s.; small grinding, 70s. per cwt., in bags, ex store.

GUAIACUM.—A very fair demand this week, chiefly for export, with values held at 1s. 2d. to 1s. 3d. per lb.

GUM ACACIA.—There is a better tone in this market and values show a good recovery. More business is reported: spot, Kordofan cleaned sorts, 42s. 6d.; bleached, No. 1, 110s.; extra, 120s. per cwt.; shipment, Kordofan cleaned sorts, February-March, 36s. 9d., and April-May, 37s. per cwt., c.i.f., for new crop.

HONEY.—A very fair inquiry continues, and the spot market is keeping fully steady. Jamaican, dark manufacturing, 32s. up to 48s. for pale set. Haiti, amber to pale grainy, 24s. 6d. to 27s. 6d.; Trinidad, dark liquid, 29s. up to 42s. 6d. for pale set. San Domingo, dark liquid, 29s., in bond. Guatemala, 28s., in bond. Mexican, amber, about 28s. per cwt., in bond.

HYDRASTIS.—This market is firm, business of limited size. Spot, 10s. 6d.; shipment, 10s. 3d. per lb., c.i.f., with supplies reported short.

IPPECACUANHA.—A steady business at full prices is recorded. Matto Grosso, B.P. root, 5s. 6d. to 5s. 9d. per lb. Some lots of inferior quality quoted at about 5s. 3d.; shipment held at 5s., c.i.f.

LYCOPodium.—Market is firm owing to scarcity of supplies. Any available now quoted up to 4s. 3d. per lb., spot.

MENTHOL.—Business has been moving on a good scale and the market continues firm at the advance. K/S brands, spot, up to 15s. per lb. Japanese shippers quote February-March at 14s. 1*½*d. and March-April at 14s. 3d. per lb., c.i.f., with re-sellers of January-March at 13s. 9d., c.i.f. There has been a steady Continental inquiry on this market for prompt shipment.

MERCURY.—The Spanish-Italian group report their shipment quotation is very steady and business has been very good during the past week. Quoted at 61 dollars, 50 cents per bottle, f.o.b., Continent; spot, in small lots, £12 10s. to £12 10s. 6d. per bottle, ex store.

OPIUM.—Average small spot business is reported: spot, 1s. 4*½*d. to 1s. 5d. per unit, landed and duty paid.

ORRIS ROOT.—Spot prices are rising owing to shortage of spot supplies: for good Florentine up to 70s. per cwt. is now asked.

ORANGE PEEL.—Some thin cut on spot is quoted at 1s. 3d. per lb.; new crop, quarters, firm at 67s. 6d. per cwt., c.i.f., to arrive.

PEPPER.—Values are again fractionally easier on the week, and the market has remained dull: Lampung, in bond, 2*½*d.; shipment, February-March, 2*½*d.; March-April, 2*½*d.; August, 2*½*d., c.i.f. Tellicherry, spot, 4*½*d.; shipment, February-April, 34s., c.i.f. Aleppy, spot, 4*½*d.; shipment, February-April, 34s. 6d., c.i.f. White Muntok, in bond, 5d.; shipment, February-March, 4*½*d.; March-May, 4*½*d. per lb., c.i.f.

PIMENTO.—Spot values maintained on a quiet market; shipment is quoted easier: spot, 7*½*d. per lb.; shipment, February-April, 65s. per cwt.

RHUBARB.—Values are firmly held here, and the supplies continue to shrink and are now chiefly composed of old odd lots. Only some small Shensi left for which 4s. 9d. to 5s. is asked. High dried, flat, firm at 1s. 9d. to 2s., and in limited supply. Rough round, 1s. 6d. to 1s. 7d. per lb. No shipment offers.

RUBBER.—Values are about maintained on the week, fair business, market steady: standard ribbed smoked sheet, spot, 7*½*d.; February, 7*½*d.; March, 7*½*d.; April, 7*½*d.; May-June, 7*½*d.; July-September, 7*½*d.; October-December, 7*½*d. per lb.

SEEDS.—**ANISE.**—Spot, duty paid, Spanish, 67s. 6d.; Bulgarian, 32s. **CARAWAY.**—Market remains firm and unchanged: Mazagan, spot, 35s.; Spanish, 48s. to 52s. 6d., all duty paid. **CARAWAY.**—Dutch, spot, 42s., duty paid, 35s. 6d., f.o.b., Holland. **CORIANDER.**—Morocco now offered at 25s., spot, duty paid, and for shipment, 22s. 6d., c.i.f. **KUMIN.**—Morocco, 48s. 6d., spot, duty paid; Malta, 47s. 6d. **FENUGREEK.**—Morocco, sold at 14s. 6d., spot, duty paid; 11s. 6d., c.i.f., quoted for shipment. **MUSTARD.**—English, 21s. 6d. to 30s. per cwt., according to quality.

SENNA.—Business has been about average, with prices ruling steady. Tinnevelly leaves and pods unchanged at the values given in detail last week. Alexandrian hand-picked pods of good quality continue in request, and most of the recent arrivals have met with a ready sale. Extra bold selected at 6s. 6d.; No. 1, 3s. 6d. to 4s. 6d.; No. 2, 2s. 6d. to 3s. 3d.; No. 3, 1s. to 1s. 9d. per lb., as to quality. Manufacturing grades are steady at 3*½*d. to 4*½*d. per lb., with some darkish split pods at cheaper prices. Recent imports of these grades have been negligible, and the stocks which accumulated during the past years are now considerably depleted. Unless values improve sufficiently to attract shippers to send over fresh consignments stocks here seem likely to become short in due course.

SHELLAC.—At the slight recovery in values the market is steadier: spot, standard TN orange, 5s. to 5s.; fine orange, 7s. 6d. to 15s.; pure button, 7s. to 8s. 6d. per cwt., spot. For delivery, TN, March, 5s. 6d.; May, 5s. For arrival, TN, February-March, 5s. per cwt., c.i.f.

SQUILL.—Rather more inquiry on the market, and dealers' prices are now steady at about 4s. to 5s. per cwt., as to quality.

STROPHANTHUS.—Some parcels of good clean new crop seed, 100 per cent. Kombé are offering on spot at 3s. 4d. to 3s. 6d. per lb.

TONKA BEANS.—Fair sales are reported this week, and values for Para beans are held firm at 3s. 9d., spot, and shipment at 3s. 3d. per lb., c.i.f. Angostura, spot, 8s. 6d. per lb.

TRAGACANTH.—Average inquiry for most grades, with prices keeping quite steady: druggists' qualities, £20 to £29. Some interest in grades ranging from £14 to £19. Low textile grades quoted from 6s. to £6 per cwt. ex store.

VALERIAN ROOT.—Dealers' spot quotations are slightly easier at 4s. to 4s. 6d. per cwt.

WAX.—BEES'.—Market is steady, moderate inquiry: Abyssinian, spot, 12s.; in bond, 10s.; shipment, 10s., c.i.f. Benguella, spot, 12s.; shipment, 10s., c.i.f. Conakry, spot, 12s. nominal; shipment, 10s. per cwt. **CARNAUBA.**—Continues rather quiet, with values about unchanged. Fatty grey, spot, 17s.; afloat, 16s.; shipment, February, 15s., c.i.f. Chalky grey, spot, 17s.; shipment, February, 15s., c.i.f. Primeira, spot, good quality, firm at 22s.; shipment, February, 20s., c.i.f. Mediana, spot, 20s.; shipment, 19s. 6d. per cwt., c.i.f.

Essential Oils, etc.

BUSINESS continues to be mostly confined to a limited number of products, which are keeping firm at recent advances. Anise (Star) is dearer and firm on spot. Bergamot is fully steady. Sicilian lemon is firm but quiet. Java citronella is steadier forward. Lemongrass in better inquiry. Japanese peppermint has advanced and is firm and active.

ALMOND.—Market continues steady, fair business: English-made, cwt. lots, 2s. 3d.; smaller parcels, up to 2s. 7d. per lb.; foreign, cwt. lots, 2s. 2d.; smaller parcels, up to 2s. 6d. per lb. French, bitter, 6s. 3d. per lb.

ANISE (STAR).—The spot market is firm at the further advance, and supplies are restricted. There are still no shipment offers: spot, leads, 2s. 3d.; tins, 2s. 2d.; drums, 2s. 1d. per lb., ex store.

BAY.—Small spot business at former prices: 4s. to 5s. per cent., 5s. to 5s. 3d. per lb., as to quantity.

BERGAMOT.—Since our last report there has been no further news from the source on the development of the Consortium. Spot holders are either selling in limited quantities or, if their stocks are of small dimensions, have withdrawn from the market. At the moment there are spot sellers at about 10s. per lb., with some quarters indicating 10s. 3d. for a good brand.

BOIS DE ROSE.—The demand for the Brazilian oil remains poor: spot offers for drums at about 5s. up to 5s. 4d. per lb. for smaller packings. Shipment, in drums, 4s. 9d. per lb., c.i.f.

CAJUPUT.—Market remains dull: B.P., 1s. 9d. to 2s. 1d. per lb., as to quantity.

CANANGA.—Business on quiet side, values fairly steady: spot, 11s. 6d. to 11s. 9d.; shipment, about 9s. 6d. per lb., c.i.f.

CARAWAY.—Limited inquiry, with Russian oil offered cheaply: Dutch rectified, 9s. 3d. to 9s. 6d.; crude, 8s. 9d. to 9s., landed and duty paid, as to quantity.

CASSIA.—Any good quality oil on spot would be worth about 3s. 8d. to 3s. 9d., while there are cheaper offers of inferior oils; shipment is dull and quoted at about 3s. 1d. per lb., c.i.f.

CEDARWOOD.—A fair business is reported, with the market competitive: American, in drums, 1s. 1d.; smaller packings, up to 1s. 4d. African oil, spot, 1s. 1d., in drums, and small parcels, up to 1s. 4d. per lb.

CINNAMON LEAF.—Market is steady, business quiet: Ceylon oil, spot, 2s. 7d., in drums, and up to 2s. 10d. for smaller packings; shipment, about 2s. 4d. per lb., c.i.f., in drums.

CITRONELLA.—Business seems to be poor. The Java oil is reported slightly better on quotation for shipment: Ceylon, spot, drums, about 1s.; smaller parcels, 1s. 1d. to 1s. 4d.; shipment, drums, about 9d. per lb., c.i.f. Java, spot, drums, 1s. 2d. to 1s. 3d.; smaller parcels, 1s. 3d. to 1s. 7d.; shipment, drums, 1s. 0d. per lb., c.i.f.

CLOVE.—Moderate inquiry, with quotations unchanged: Madagascar, spot, drums, 3s. 1d.; smaller packings, up to 3s. 6d. per lb.; shipment, 2s. 7d. per lb., c.i.f.

EUCALYPTUS.—Although spot business is quiet the market is keeping fully steady: Australian, 7s. to 7s. per cent., 1s. 1d. to 1s. 1d.; 8s to 8s per cent., 1s. 2d. to 1s. 3d. per lb., landed; higher prices for small lots on spot. Spanish, 7s. to 7s. per cent., 1s. 2d. per lb., ex store.

GERANIUM.—A little business in Bourbon on spot, and prices seem steadier, although there may still be an occasional cheap offer about: Bourbon, spot, 21s. 6d. to 22s. 6d.; shipment, 21s. 3d., c.i.f. Algerian, spot, 21s. 6d. to 22s. 6d.; shipment, 20s. 6d. per lb., c.i.f.

GINGERGRASS.—Market remains very quiet: spot, about 5s.; shipment, about 4s. 6d. per lb., c.i.f.

GRAPE-FRUIT.—Supplies of Empire hand-pressed oil continue to be quoted on spot at about 16s. 6d. per lb. for small lots.

HO (SHIU).—Average business being done on spot, with dealers quoting from 1s. 7d. to 2s. 1d. per lb., as to quality and quantity.

JUNIPER BERRY.—Good quality oil is quoted in the region of 3s. per lb. for small parcels. There are cheaper oils mentioned.

LAVENDER.—Some few inquiries here, with prices competitive and varying according to quality of oil: 50 to 52 per cent., 29s. 6d.; 48 to 50 per cent., 27s.; 40 to 42 per cent., 22s.; 38 to 40 per cent., about 20s.; 36 to 38 per cent., 18s. per lb., landed, for good brands. Lavandin is quoted 11s. to 12s. 6d. per lb.

LEMON.—Business has been restricted in volume this week. Spot holders keep their prices firm at from 10s. 3d. to 10s. 6d., with sales limited to modest quantities and some holders not offering their remaining stocks. Californian oils continue to be inquired for, but spot stocks are practically nil. No cold-pressed offered, but a limited quantity may be shipped in due course. Some distilled oil is on the way here, but most of it has been booked. Spot quotations unchanged: distilled, large drums, 4s. 3d.; small drums, 4s. 3d.; cold-pressed, 5s. 5d. per lb.

LEMONGRASS.—The shipment market has received a little more inquiry, with prompt about 1s. 10d., and distant position about 1s. 10d. per lb., c.i.f. Spot offers are at about 2s. 3d. per lb.

NEROLI.—Very little inquiry, quotations irregular: spot, from 14s. to 18s. 6d. per oz., as to quality and quantity.

NUTMEG.—The demand has slackened down, with American oil still quoted on spot from 5s. 1d. to 5s. 4d. per lb., ex store; shipment, 4s. 6d., c.i.f. Dutch oil, for shipment, is offering at about 5s. 9d. per lb., c.i.f. English-made oil ranges from 5s. 10d. to 7s. 6d. per lb., as to source.

ORANGE.—The very limited imports of French Guinea new crop oil are quoted up to 2s. 8d. to 2s. 9d. per lb. for drums. Overdue shipments appear to be held up at Marseilles, due to a strike at the docks. The shipment prices continue at about 2s. per lb., c.i.f. Californian oil is moving fairly well on spot, with one case 3s. 4d., and two or more cases at 3s. 2d.; small drums, 3s. 1d. per lb.

PALMAROSA.—The demand for this oil is disappointing, and one or two spot sellers are offering well under the shipment figure: spot, 5s. 9d. to 6s. per lb., as to quantity; shipment market is also dull; quoted at 5s. 9d., c.i.f.

PATCHOULI.—This market is firm but quiet on spot, with no shipment offers and bids ignored: Singapore, 18s. to 18s. 3d.; Seychelles, 12s. 3d. to 12s. 6d. per lb. for limited quantities.

PEPPERMINT.—Quite a good business has been done in the Japanese oil, and values are again dearer, with the spot and shipment markets firm. On spot business done at 5s. 9d., with holders now asking up to 6s. per lb. Japanese shippers' cables advise firm market, with February-March at 6s. 2d. and March-April at 6s. 3d., c.i.f. Resellers of January-March at 5s. 9d.; April-May at 5s. 10d., and July-August at 6s. per lb., c.i.f. No cables have been received since the political trouble in Japan on Wednesday. Steady business in American natural oil, with the best brands of 50 per cent. menthol content oil steady at 2 dollars 10 to 15 cents. per lb., c.i.f. Oil of 45 per cent. menthol, about 2 dollars, c.i.f. Some brands are quoted at lower prices.

PETITGRAIN.—A little better inquiry here: spot, 3s. 10d. to 4s., as to quantity; shipment, about 3s. 5d. per lb., c.i.f.

ROSEMARY.—Spot quotations vary considerably and depend on the quality oil. For first-class oil the value is steady at 2s. 3d., while there are offers down to 1s. 8d. and 1s. 9d. for a quantity.

SAFROL.—Dealers are keeping their spot prices at about 2s. 3d. to 2s. 4d. per lb., as to quantity.

SANDALWOOD.—Genuine East Indian Mysore, 19s. per lb., in one-case lots on spot; market is rather unsteady, with cheaper offers in some quarters, particularly for good quantities. English-made East Indian, 22s. 6d. to 25s. per lb., as to quantity. English-made West Indian, cwt. lots, 6s. 9d.; 56 lb., 6s. 10d.; 14 lb., 7s. per lb. Australian, case lots, 15s. 3d. per lb.

SASSAFRAS.—Moderate spot inquiry, with natural oil at about 3s. 7d. to 3s. 10d., as to quantity. Artificial oils at cheaper prices.

SPIKE.—Spot quotations for Spanish oil cover a wide range and depend on the quality of the oil. There are offers down to 3s. 8d., but for a good oil the value is steady 4s. to 4s. 2d. per lb., as to quantity.

VETIVERT.—Market has been dull: Bourbon, spot, 38s. per lb. for small parcels; shipment, about 30s. od., c.i.f.

WORMSEED.—U.S.P. quality oil is steady for shipment at 8s. 9d., c.i.f., and spot at about 9s. per lb. Inferior oils at cheaper prices.

February 29, 1936

Commercial Notes

INDIAN FINE CHEMICALS.—It is reported a company with the title of Chemical & Industrial Pharmaceuticals, Ltd., is to commence the manufacture of pharmaceutical products, with works in Bombay and Bhopal. Dr. K. A. Hamied is managing director of the company.

JAPANESE CITRONELLA OIL.—Imports have averaged annually about 200,000 yen, but production is increasing and is estimated to be able to meet domestic requirements within the next two or three years. The producing company has manufactured this year about 60 tons of citronella oil from its own plantations in Formosa.

JUGO-SLAVIA PYRETHRUM PRODUCTION.—In 1935 production amounted to about 700 metric tons. At the beginning of the year prospects were good for a greater yield, possibly 800 metric tons, but the snow and cold weather lasted longer than usual. The quality of 1935 production is better than that of the 1934 crop. The analysis of pyrethrum grown in the Province of Primorska shows an average of 0.90 per cent. pyrethrin, while that produced in the Province of Zeta 0.80 per cent. Stocks on hand of 1934 flowers at December 1, 1935, were estimated at 30 metric tons.

FRENCH PSYLLIUM SEED PRODUCTION.—Crops for the years 1927 to 1935 were estimated as follows, in metric tons:—1927, 500; 1928, 300; 1929, 350; 1930, 1,400; 1931, 2,000; 1932, 2,500; 1933, 500; 1934, 230; 1935, 100.

BRAZILIAN CARNAUBA WAX EXPORTS.—During 1934, Piauhy shipped out of the State 2,910 tons of carnauba wax, valued at 16,516 contos. Most of this quantity was transported by railway into the State of Ceara, from where it was shipped to foreign countries. The centres of the largest production in Piauhy are Campo Major, Piracurica, Oeiras, Jose de Freitas, Floriano and Picos. For the first nine months of 1935 exports of carnauba wax from Brazil amounted to 5,057 metric tons, valued at 32,505 contos. The following table shows the ports of shipment and the quantity and value shipped from each port during 1934:

Port of Shipment	Quantity (kilos)	Value (contos)
Ilha do Cajueiro	2,386,491	11,055
Amarracao	84,207	454
Camocin	366,676	1,830
Fortaleza	2,276,507	10,176
Areia Branca	236,927	797
Pernambuco	303,131	1,218
Bahia	270,194	1,177
Rio de Janeiro	84,699	440
Other ports	136,989	716
Total	6,145,821	27,862

Note.—1 conto equals approximately \$80.00 at the present official rate of exchange and \$56 at the free rate.

GERMAN EXPORTS OF SYNTHETIC PERFUME PRODUCTS.—Shipments during January-October, 1935, totalled 720,700 kilos., valued at 3,917,000 marks, compared with 521,200 kilos. (3,456,000 marks) during the first ten months of 1934. The chief destinations were as follows, with quantities in 100 kilos.:—

	1934	1935		1934	1935
Belgium	124	88	Spain	78	120
Danzig	20	—	Czechoslovakia	233	350
Poland	23	—	Hungary	81	119
France	97	63	British India	324	434
Great Britain	760	808	China	386	517
Italy	276	224	Japan	422	823
Netherlands	397	518	Netherlands India	125	71
Austria	110	176	United States	268	405
Sweden	191	203	Argentina	77	88
Switzerland	531	1,011	Brazil	116	206

SOUTH AFRICAN ESSENTIAL OILS IMPORTS.—The imports for the year 1934, which do not include spirituous essences for food and flavouring, were:—

	Food Essences and Extracts, Non-spirituous	Flavouring Extracts, Non-spirituous	Essential and Perfumed Oils
United Kingdom	£ 52,518	£ 8,909	£ 10,928
France	24	4,941	3,014
Italy	110	199	3,329
Switzerland	229	36	314
United States	195	1,936	2,547
Netherlands	51	2,303	6,934
Germany	88	535	4,510
Total	53,450	18,328	39,395

NEWFOUNDLAND COD-LIVER OIL.—Shipments for the years 1924 to 1934 were as follows:—

	Gallons	\$	Tons
1924-25	77,484	76,533	6,171
1925-26	169,645	197,244	5,145
1926-27	276,273	328,123	4,860
1927-28	357,028	448,180	3,384
1928-29	364,239	492,763	3,181
1929-30	163,805	246,434	3,190
1930-31	118,487	120,922	3,625
1931-32	158,538	136,279	2,521
1932-33	184,641	167,873	2,603
1933-34	169,123	114,935	2,172

London Drug Stocks

LONDON STOCKS AT JANUARY 31, 1935 AND 1936:—

Article	Quantity	Jan. 31, 1936	Jan. 31, 1935
Aloes	cwt.	110	473
Cascara Sagrada	tons	58	157
Bees' Wax	packages	1,416	2,399
Japanese Vegetable Wax	cases	193	162
Camphor	packages	534	476
Cardamoms	cwt.	378	704
Dragon's Blood	cases	133	112
Galls, China and Japan	cases	798	290
Gum Acacia	packages	11,786	6,414
Asafetida	cwt.	416	232
Benzoin	cwt.	845	680
Olibanum	packages	278	357
Tragacanth	packages	4,572	5,469
Ipecacuanha	cwt.	151	96
Nux Vomica	cwt.	476	454
Rhubarb	cwt.	180	471
Senna	bales	4,245	5,245
Sebulae	cases	156,620	313,041
Turneric, Bengal	tons	16	36
Turneric, Madras, Cochin, etc.	tons	77	44
Sandaac	packages	178	78
Mastic	packages	5	27
Guaiacum	cwt.	145	140
Ammoniacum	packages	28	26

Sudan Gum Acacia Exports

BOXALL & CO. report shipments in December 1935 amounted to 624 tons, compared with 1,416 tons in December 1934. Shipments for the year 1935 totalled 22,462 tons, compared with 21,092 tons in 1934. The chief destinations were as follows:—

Destination	1934			1935		
	Jan.-Nov.	Dec.	Total	Jan.-Nov.	Dec.	Total
Great Britain	4,319	273	4,592	5,403	39	5,442
U.S.A.	2,905	291	3,196	156	3,684	3,684
France	3,059	41	3,100	1,975	61	2,036
Germany	2,137	184	2,321	1,864	203	2,067
Italy	1,325	128	1,453	1,854	27	1,881
Belgium	1,611	121	1,732	1,540	52	1,592
Japan	844	92	936	1,354	5	1,359
Holland	779	30	809	641	15	656
Spain	393	60	453	554	4	558
Sweden	259	17	276	536	—	536
Norway	55	10	65	85	1	86
Australia	456	59	515	659	—	659
New Zealand	55	2	57	94	—	94
China	236	1	237	259	7	266
Canada	133	20	153	205	15	220
British India	127	20	147	16	—	16
Denmark	150	35	185	114	3	117
Finland	81	—	81	115	3	118
Poland	56	5	61	64	—	64
Rumania	101	—	101	46	2	48
Turkey	12	6	18	30	—	30
Greece	41	5	46	69	8	77
Egypt	144	12	156	327	19	346
South Africa	26	1	27	12	1	13
Dutch Indies	29	—	29	25	—	25
Argentine	161	—	161	76	—	76
Brazil	60	—	60	152	—	152
Uruguay	12	—	12	22	—	22
Mexico	13	—	13	32	—	32
Other countries	97	3	100	187	3	190

The export figures are made up of the following qualities:—

	Hashab	Bleached	Talha	Total
December, 1934, tons	... 1,301	3	112	1,416
December, 1935, tons	... 461	23	140	624
January-December, 1934, tons	... 19,117	168	1,807	21,092
January-December, 1935, tons	... 20,110	213	2,139	22,462

Correspondence

Letters should be written on one side of the paper only. Correspondents may adopt an assumed name, but must in all cases furnish their real name and address to the Editor

The Estimation of Aloin

SIR.—Recently we have received two complaints that aloin of our manufacture exceeded the limiting amount of water-insoluble matter prescribed in the British Pharmacopoeia. Upon investigation it was found that the complainants' chemist had performed the solubility test at or under a temperature of 15° C. It was shown by C. R. Page, in his paper read at the British Pharmaceutical Conference held at Leeds in 1934, that the solubility of aloin in water is affected to a marked degree by the temperature at which the test is performed, and that many genuine samples of aloin fail to pass the pharmacopoeial test if it is conducted at a temperature of 15.5° C. It was also pointed out that vigorous shaking is necessary to effect complete solution of the water-soluble matter. The number of times during the two hours' duration of the test in which the vessel is shaken, and the intensity of the shaking, all influence the result. Definite conditions are necessary in order to obtain concordant results. In the writer's experience, the following procedure, carried out by different workers, gives results in close agreement:—

1.0 gram of aloin is placed in a stoppered 250-mil Erlenmeyer flask with 120 mils of distilled water at 25° C. The flask is transferred to a mechanical shaker, the temperature being maintained at 25° C., and the shaking continued for two hours. At the expiration of this time the flask is cooled to 15.5° C. and allowed to stand for half an hour. The solution is filtered under pressure through a tared Gooch crucible prepared with asbestos. Care is taken to see that the filtrate is quite clear, and if the first runnings are at all cloudy the liquid is returned to the filter. The flask and the residue on the filter are next washed with 25 mils of distilled water (15° C.), added in five portions, and allowed to filter slowly. The residue is then dried to constant weight at 100° C.

It is hoped that something will be done in subsequent addenda to the B.P. to lay down definite conditions, especially in regard to control of temperature for this test. Otherwise there is a likelihood that manufacturers will have the same aloin accepted during the summer and rejected during the winter months.

Yours faithfully,

W. A. N. MARKWELL.

Analytical Laboratory, Potter & Clarke, Ltd.,
Fairclough Street, London, E. I.

The One-Man Pharmacy

SIR.—Xrayser hits the nail on the head when he suggests (C. & D., February 22, p. 205) that many branch establishments are unable to pay a manager an adequate salary, £300 per annum being too often a sum in excess of what the business can afford. Those of us who are in business on our own account are deterred from the experiment of opening branches for this very reason; and, moreover, we have actually seen branches relinquished in the effort to cut losses. The average pharmacist is content to own one shop even if a qualified assistant is out of the question. This brings me to the point at which (as it seems to me) Xrayser is fundamentally mistaken. He thinks that many small proprietors would be "happier" as branch managers. Is he not aware of the very common type of Englishman who prefers to be his own master on a small income, rather than be somebody's servant at a larger? Fortunately it is realised by perhaps a majority of us that money is not everything, that even a partial liberty is a precious boon, and that to be "one's own master" is a blessing worth paying for. And to-day it is being paid for very dearly: hence Xrayser's misconception of our English mental make-up. The one-man pharmacist (if so I may describe him) has little leisure when, as so often happens, his only assistance is afforded by an apprentice and an errand-boy. He can seldom afford an adequate holiday, and he submits to the compulsion of Sunday and early-closing duty lest some inconsiderate client should take umbrage at his absence and transfer his custom to a larger shop where a skeleton-crew is always in attendance. He dreads an illness, since a locum costs money and (what is worse) makes his small business smaller still. So much would appear to endorse Xrayser in his contention that a manager is "happier" than a small proprietor. But I maintain that in spite of all his handicaps, and

perhaps because of his strivings, heroisms, running of risks and braving of perils, the average Englishman is happiest when he calls no man master, and when he can only be "sacked" by his own folly or by extreme ill fortune. I for one would deplore the day when a safe servitude would be preferred to a risky, arduous, ill-paid independence.—Yours truly,

ONE-MAN SHOW (24/2).

SIR.—It is true that some owners of small pharmacies do not make so much for themselves as a manager may receive in wages, but I doubt whether the manager's position is always the happier one. In some instances where the proprietor has only one or two shops and takes a personal interest in his staff it may be so, although my own experiences as manager of small branches have led me to a different conclusion. It is an axiom in the retail trade that the business comes first, but there should be a limit, and the comfort of the manager should not come last. I have never worked for multiple concerns, but I understand that in some of them the managers of the branches are expected to show a definite increase in the returns yearly, whatever the state of trade may be. It will be readily seen that the lot of a branch manager in such a case is not a happy one. But in spite of the possibility of a lower income (at any rate to start with), and the added responsibility of ownership, I think that in pharmacy there will always be the urge to be the owner of one's business, however small. I have known more than one pharmacy, almost derelict, bought by men who have revived them into good businesses. If a man has not the courage or energy required, he will either fail or drag on just managing to make ends meet; but such a man would be a failure as a manager, and as he grew older would find it difficult to get employment. Then there is the question of security; the employee is never quite certain of his job. I have been in both positions, manager and then proprietor, and if I had to choose again it would be for the latter; there is the satisfaction that every hour one puts in and every extra bit of work goes to one's own credit.—Faithfully yours,

BETTER CHOICE (25/2).

Unfair Competition

SIR.—There has been a good deal of complaint by all kinds of traders about the unfair competition the retailer is subjected to by the sale of goods at reduced prices in offices, works, canteens and other places. I have just been reading a report in a local paper of the formation of a new ratepayers' association, and one of the advantages put forward by the promoters was that members of the association would be able to come to arrangements with local traders, so that they could get their goods at an appreciable discount. Of course, the traders should refuse to accept any such arrangement; but where the association is a strong one pressure can be applied in many ways, and even if the traders definitely refuse there are sure to be some members of the association connected with wholesale suppliers who would be able to purchase goods at a reduced price. The strange part about it is that people who purchase their requirements in this way cannot see that they are undermining the businesses of the largest ratepayers in the town, the shopkeepers, who by paying the heaviest rates lessen the burden of the private householders.—Yours truly,

DOUBLERATE (18/2).

Subscribers' Symposium

For interchange of opinion among "C. & D." readers and brief notes on business and practical topics.

Appreciation

Referring to the communication signed "B. A." (22/1) in your issue of February 22, I have been in the drug trade for sixty years, and have read every number of the monthly and weekly issues of THE CHEMIST AND DRUGGIST published during that time. As I write now there is lying on the desk before me a copy of "The Chemist and Druggist; a Monthly Trade Circular," as it was then called, dated September 15, 1859.—Senex (25/2).

Miscellaneous Inquiries

When samples are sent particulars should be supplied to us as to their origin, what they are used for, and how. We do not undertake to analyse and report upon proprietary articles nor to publish supposed formulas for them.

C. & J. (25/22).—CALIFORNIAN LEMON OIL.—A revised standard for lemon oil admitting the Californian product was issued as an interim revision to the United States Pharmacopoeia last August, and the specifications were included in the Pharmacopoeia itself which appeared in November. Details of the specification are as follows:—

Description and physical properties.—A pale yellow to deep yellow or greenish-yellow liquid, having the characteristic odour and taste of the outer part of fresh lemon peel.

Tests for identity and purity.—The oil is soluble in three volumes of alcohol, and in all proportions in dehydrated alcohol, in carbon disulphide, and in glacial acetic acid. Specific gravity: 0.849 to 0.855 at 25° C. Optical rotation: varies from +57° to +65.6° in a 100-mm. tube at 25° C. Refractive index: 1.4742 to 1.4755 at 20° C. A solution of the recently expressed oil in alcohol (1 in 3) is neutral or only slightly acid to moistened litmus paper. Place 50 c.c. of oil of lemon in a 250 c.c. three-bulb Ladenburg flask of approximately the following dimensions: the lower or main bulb 6 cm. in diameter, with the smaller condensing bulbs 3.5 cm., 3.0 cm. and 2.5 cm., respectively, in diameter; the distance from the bottom of the flask to the side arm 20 cm. Distil the oil at the rate of 1 drop per second until the distillate measures 5 c.c.; the angle of rotation of the first 5 c.c. is not more than 5° less than that of the original oil. The refractive index of this same portion is not less than 0.0010 and not more than 0.0027 lower than that of the original oil.

D. G. (25/28).—ASPIRIN THROAT SPRAY.—Owing to the fact that acetylsalicylic acid hydrolyses in contact with water and to the unstable nature of salts of acetylsalicylic acid, it seems to us that it would be preferable to use a solution of salicylic acid, and we suggest the following formula from the Central Throat Hospital Pharmacopoeia:—

Ac. salicyl.	...	...	...	...	gr. v.
Boracis	...	...	...	...	gr. vij.
Aq. dest.	...	...	...	ad	3 <i>j.</i>

V. H. (21/22).—JACOBSON'S SOLUTION.—Jacobson's solution (benzyl-cinnamic ester so called) is a solution of ethyl cinnamate, $C_8H_7O_2C_2H_5$, in benzyl alcohol and olive oil. The dose is 0.25 to 1 c.c. intramuscularly in the gluteal muscles.

H. W. (24/25).—BOOK ON EUGENICS.—The most generally suitable book in the circumstances you mention is "Applied Eugenics" by P. B. Popene and R. H. Johnson (Macmillan, 12s. 6d.). W. E. Castle's "Genetics and Eugenics" (Milford, 12s. 6d.) has a wider scope, and for about three-quarters of its space deals with genetics rather than eugenics.

H. & S. (24/25).—SUNTAN OIL.—The following are formulas for suntan oil containing olive oil:—

I					
Arachis oil	...	...	...	...	60 gm.
Olive oil	...	...	...	...	38 gm.
Bergamot oil	...	...	...	...	1 gm.
Waxoline brown	...	...	...	...	a sufficiency

This produces browning of the skin as the result of direct application.

II					
Arachis oil	...	...	...	...	60 gm.
Olive oil	...	...	...	...	35 gm.
Bergamot oil	...	...	...	...	1 gm.
Laurel-berry oil	...	...	...	...	3 gm.
Chlorophyll	...	...	...	...	1 gm.

The above produces browning after application and on exposure to the action of the sun.

E. S. O. C. (24/82).—HYSTERIA IN DOGS.—Chloretone is suitable for giving either in powder form or in capsules as a sedative in cases of hysteria in dogs. Lack of vitamins, particularly A, is considered to be one of the chief causes of the complaint. Change of diet is important: brown bread should be given in place of biscuit; raw meat and fish should be provided on alternate days, and a tablespoonful of shredded carrot may be given once a day. An alternative formula for a sedative was suggested in the *C. & D.*, February 22, p. 230.

M. J. B. (25/83).—PASTA MAGNES. SULPH.—The following formula for magnesium sulphate paste is given in "Pharmaceutical Formulas," Vol. I:—

Magnesium sulphate, dried	...	...	24 oz.
Glycerin of carbolic acid or glycerin	...	...	11 oz.

The glycerin is warmed and the magnesium sulphate added a little at a time with constant stirring. Preserve in a well-covered jar.

J. P. C. (24/28).—BOOKS ON MATERNITY.—The following should meet your customer's requirements:—"Introduction to Midwifery" (4s. 6d.); "Midwife's Dictionary and Encyclopaedia" (3s. 6d.). These are published by Faber & Faber, Ltd.

W. C. T. (24/28).—PRESCRIPTION CHARGE.—Five shillings is a fair charge for the prescription and agrees with the *C. & D.* costing system, as shown by the following:—

Elixir bromo-valerianate	...	...	3 <i>iv.</i>	30 <i>o</i>
Metatone	...	...	3 <i>vij.</i>	18 <i>o</i>
Liq. arsenicalis	...	...	1 <i>lxl</i>	1 <i>o</i>
Aq. dest.	...	...	ad 3 <i>vii.</i>	1 <i>o</i>
			Container	2 <i>o</i>
			Oncost	8 <i>o</i>
				60 <i>o</i>

M. J. M. C. (24/82).—SILVERING BRASS AND TIN.—Several methods have been suggested, apart from electro-deposition, for silvering brass and tin, but so far as we are aware the results have not been altogether satisfactory. You may care to experiment with the following formulas:—*Brass.*—Zinc, brass and copper are silvered by applying a paste of the following composition: Ten parts of silver nitrate dissolved in 50 parts of distilled water, and 25 parts of potassium cyanide dissolved in distilled water; mix, stir and filter. Moisten 100 parts of whiting and 400 parts of powdered tartar with enough of the above solution to make a paste-like mass, which is applied by means of a brush on the well-cleaned objects. After the drying of this coating, rinse off, and dry in sawdust. *Tin.*—Prepare a solution of 3 parts, by weight, of bismuth subnitrate in 10 parts of nitric acid of 1.4 specific gravity, to which add a solution of 10 parts of tartar and 40 parts of hydrochloric acid in 1,000 parts of water. In the mixture of these solutions immerse the tin articles freed from grease and oxide. The pulverous bismuth precipitated on the surface is rubbed off, whereupon the objects appear dark steel grey. For silvering prepare a mixture of 10 parts of silver chloride; 30 parts of cooking salt; 20 parts of tartar, and 100 parts of powdered chalk, which is rubbered in a slightly moist state on the bismuth surface of the tin articles, using a flannel rag. The silver separates only in a very thin layer, and must be protected against power and light before tarnishing by a coating of preservative or celluloid varnish.

Retrospect of Fifty Years Ago

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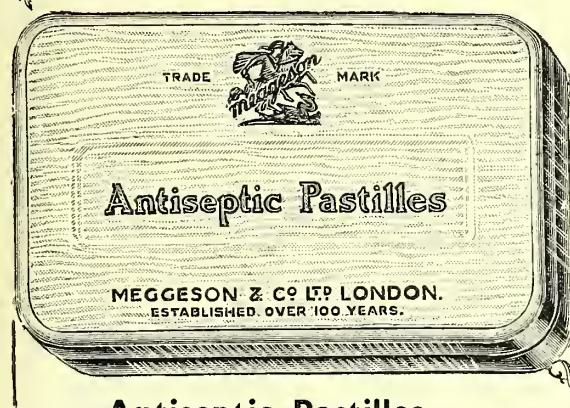
"The Chemist and Druggist," February 15, 1886

The C. & D. Becomes a Weekly Newspaper

Last month we announced our intention to publish this journal twice instead of once a month. We have since received letters from all parts of the kingdom congratulating us on this new departure, and indicating an unmistakable unanimity in favour of more frequent appearance. These letters have convinced us that the trade would welcome our publication at still shorter intervals, and we have therefore resolved to change once for all and appear as a weekly. . . . On March 6, therefore, the first number of the weekly issue of THE CHEMIST AND DRUGGIST will be sent to subscribers, and afterwards every Saturday until the date when the subscription, as now paid, would expire.

PASTILLES and LOZENGES for your Spring Trade

Packed in Attractive Tins or in Bulk



Antiseptic Pastilles

in 2 oz. tins 5/6 per doz.
,, 4 oz. „ 10/6 „ „

Sore Throat Lozenges

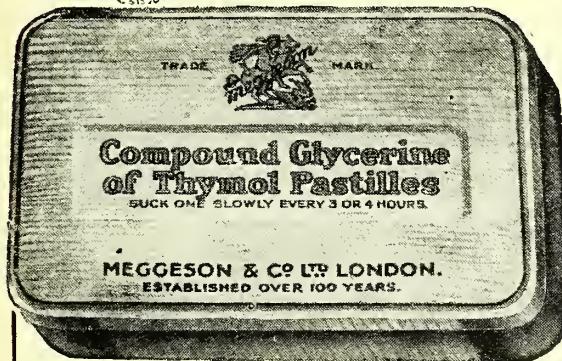
P.A.T.A Retail Prices Wholesale Per doz. net

1/-	6/6
1/9	12/6



MEGGESON & Co. Ltd. LONDON, S.E.16

Tel.: BERmondsey 1741-1742



Compound Glycerine of Thymol Pastilles

in 2 oz. tins 5/6 per doz.
,, 4 oz. „ 10/6 „ „

Glycerine & Blackcurrant Pastilles

in 2 oz. tins 5/6 per doz.
,, 4 oz. „ 10/6 „ „



MEGGESON QUALITY IS THE RESULT
OF OVER 130 YEARS' EXPERIENCE

SOFT EXTRACTUM GLYCYRRHIZA B.P.

The manufacturers of the well-known APOLLO brand Stick Juice and B.V.B. brand Block Juice are now offering the above article in the same high and uniform quality as their other liquorice products, and at an attractive price. Packed in drums of 40-lbs. or barrels of 180-lbs. nett.

Write for Sample and Quotation to :

MACANDREWS & FORBES LIMITED
BUSH HOUSE, ALDWYCH, LONDON, W.C.2

TELEPHONE: TEMPLE BAR 5392/3

SOLAZZI

In 4 lb.
BOXES

ONE-OUNCE STICKS

In 4 lb.
BOXES

CONVENIENT . POPULAR . ECONOMICAL
NO RISK OF BROKEN STICKS
NO INCREASE IN PRICE

The Manufacturers have decided to meet
their Distributor's demand and your
Wholesaler can now supply you with

LIQUORICE JUICE

The Chemist's Brand

CREAM OF MAGNESIA

(MIST. Magnes. Hydrox. B.P. U.S.P.)

An Antacid Emulsion in almost perfect suspension produced by the
"PATTINSON" method of precipitation and therefore free from Alkali and Salts

Packed for the Wholesale Trade

ASK US TO SEND YOU A FREE 12-oz. SAMPLE BOTTLE

REGD.
BRAND
PATTINSON'S
PRODUCTS

Sole Manufacturers :
WASHINGTON CHEMICAL COMPANY

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WASHINGTON STATION, CO. DURHAM

ALKALOIDS

FINE CHEMICALS AND OPIUM DERIVATIVES

Goods
covered by
Dangerous Drugs
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subject to all
regulations

Aloin · Atropine · Bismuth Salts · Caffeine · Cantharidin
Capsicin · Chloroform · Chrysarobin · Codeine · Diamorphine
Emp. Canth. Liq. · Ephedrine · Ergotin · Eserine · Ethyl-
morphine · Gingerine · Hyoscyamine · Jalap Resin · Leptandrin
Morphine · Opium · Podophyllin Resin · Salicin · Santonin
Scammony Resin · Strychnine · Veratrine and other
Pharmaceutical Chemicals and Preparations.

T. & H. SMITH
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Blandfield Works,
Edinburgh,
32-34 Virginia St.,
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TABLETS

COMPRESSED

Packed or in Bulk

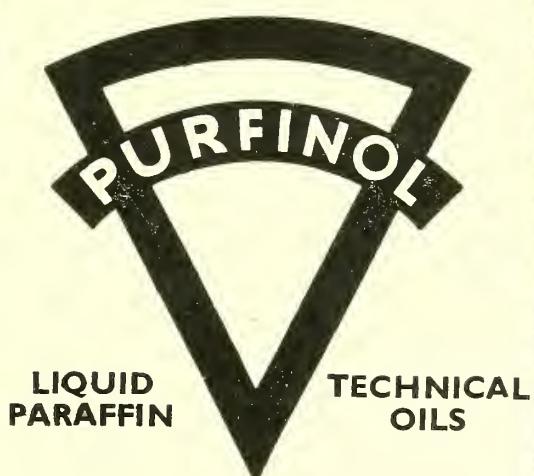
Specialists for over 30 years in all kinds of medicinal tablets. Purity of Drugs and accuracy of dosage guaranteed. Let us put up your own speciality in Tablet Form. Secrecy of Formula guaranteed

A GOOD SELLING LINE!!
A REALLY GOOD ASTHMA TABLET
PUT UP AS YOUR PROPRIETARY

SEND US YOUR ENQUIRIES FOR
SUPPOSITORIES AND PESSARIES
(NEW PROCESS) ALL KINDS.

BUCKLEY-BOWKER TABLET Co. Ltd.
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PETROLEUM
JELLIES



TECHNICAL
OILS

PURFINOL LTD.

BRETTONHAM HOUSE, LANCASTER PLACE,
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Telephone : Temple Bar 1318 & 1319
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Specify
CARNEBROS
Brand

**Aloin • Chrysarobin
 Podophyllin • Quinine
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Acetylsalicylic Acid
 Amidopyrin
 Barbitone
 Caffeine
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RASPBERRY
VINEGAR

Guaranteed to be made from the
 juice of Fresh Fruit without any
 preservatives or artificial flavourings

*Send for Sample and Quotation
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J. C. ARNFIELD & SONS LTD.
 GADSBY WORKS • STOCKPORT

ESTABLISHED 1786

TELEPHONE: 4601 TELEGRAMS: CHEMICALS

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STERLING
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CHEMICALS

**SCALE PREPARATIONS
 HYPOPHOSPHITES
 BISMUTH SALTS
 MERCURIALS
 STEARATES
 CITRATES
 ACIDS
 ETC.**

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& CO., LTD.

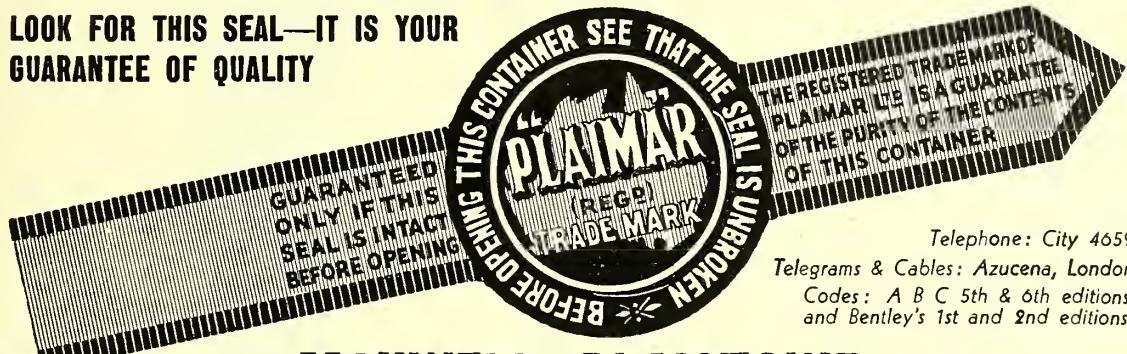
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PLAIMAR

SANDALWOOD OIL

B.P. and French Codex
DISTILLED BY PLAIMAR LTD., PERTH, W.A.

LOOK FOR THIS SEAL—IT IS YOUR
GUARANTEE OF QUALITY



THE REGISTERED TRADE MARK OF
PLAIMAR IS A GUARANTEE
OF THE PURITY OF THE CONTENTS
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Telephone: City 4659

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Hubbuck's Pure Oxide of Zinc

is made by sublimation and is
warranted to contain upwards of

99·9 PER CENT.

of pure oxide; in fact, the
impurities are not traceable

Thos. Hubbuck & Son, Ltd.

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24 Lime Street, London, E.C.3

MANUFACTURERS OF WHITE LEAD, WHITE
ZINC, PAINT, OILS, COLOURS, VARNISHES, &c.

Australian Office: 34 Queen Street, Melbourne

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in Boxes of 7 lb. and 14 lb. stamped by
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PHOSPHO-SODA (Fleet)

SALINE APERIENT—BILIARY STIMULANT

An ethical pharmaceutical product for which an extensive propaganda is being conducted with the Medical Profession

		Retail	Wholesale
Bottles of 2½ fl. oz.	-	1/6	13/6 per doz.
„ „ 6 fl. oz.	-	3/-	27/- „
„ „ 16 fl. oz.	-	6/-	54/- „

Your co-operation in promptly obtaining supplies when required will be appreciated

**THE ANGLO-FRENCH DRUG CO. LTD.,
11-12 Guilford Street, LONDON, W.C.1**

Paraffinum Liquidum B.P.

ALL
GRADES
SAMPLES & PRICES

On application
to

Sterns Ltd.
16, Finsbury Sq., London, E.C.2

WHOLESALE ONLY

Telephone : National 7644 (7 lines).
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ALSO
TECHNICAL
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GLYCERIN

We supply all grades of Glycerin
for pharmaceutical purposes

May we have your enquiries?

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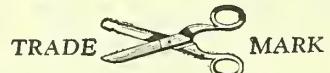
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PERRY'S POWDERS



GIVE A GOOD RETURN

NICE TO HANDLE—EASY TO SELL

Wholesale from PERRY'S POWDERS, Ltd., LEEDS

MAGSORBENT

REG.
TRADE
MARK

BRAND OF MAGNESIUM TRISILICATE

THE NEW TREATMENT FOR PEPTIC ULCERATION AND ACID DYSPEPSIA

Magsorbent (Magnesium Trisilicate) is the result of extensive research. It is a powerful Antacid and Adsorbent, and is an important advance in the treatment of peptic ulceration and acid dyspepsia.

We are shortly commencing an extensive advertising campaign to the medical profession, comprising direct mailing, liberal sampling, personal calls, and advertising in the medical press.

We ask your co-operation by being in a position to fulfil prescriptions which we anticipate will be quickly forthcoming.

MAGSORBENT is supplied in tablets and powder, as follows :—

MAGSORBENT TABLETS in tins

65 Tablets	-	2/4 size	-	21/- doz.
250 Tablets	-	7/9 size	-	69/9 doz.

MAGSORBENT POWDER in cartons

2 oz.	-	-	2/6 size	-	22/6 doz.
5 oz.	-	-	5/- size	-	45/- doz.

(P.A.T.A.)

Supplies are available from your usual wholesale house.

Manufactured solely by :—

KAYLENE LIMITED,
WATERLOO ROAD, LONDON, N.W.2

Telephone : Gladstone 1071-1072. Telegrams : Kayloidol, Gold, London.



**PARAFFINUM
LIQUIDUM
B.P.**

HIGH
VISCOSITY

**TECHNICAL
WHITE
and
HALFWHITE
OILS**

**WHITE
PETROLEUM
JELLY**

PHARMACEUTICAL
AND
TECHNICAL
Qualities

HOLROYD'S
D
OIL & CERESINE COMPANY LIMITED

3 NEW LONDON ST., LONDON, E.C.3.

TELEPHONE: ROYAL 5126-7
TELEGRAMS: ERRIKOLROY, FEN, LONDON.

**EVERYWHERE
— BOX'S
Indigestion
PILLS
ARE IN DEMAND!**

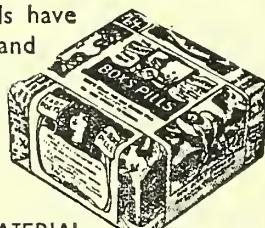


P.A.T.A. List
1/-, 3/-, 5/-, 2/-
Retail Prices

For 40 years Box's Pills have been curing Indigestion and building sales — today Box's Pills are selling better than ever.

FREE

WINDOW DISPLAY MATERIAL
WILL BRING THE BUSINESS IN
Eye-catching display stands and showcards in full colour are available "by return" from the manufacturer. Supplies of Pills through your usual wholesaler or direct.



W. H. BOX
161 KING ST., PLYMOUTH

KOMPO
FOR
COLDS

Wholesale
Prices

1/3 Size
11/6 per dozen net
3/- Size
27/6 per dozen net

Carriage Paid Gross Quantities
or equivalent.

Manufactured only by
J. F. WHITE & CO., Chemists
BENSON STREET, LEEDS.
Counter Bills free on application.

For Coughs, Colds,
Influenza,
etc.

**6^{D.}
PER BOX**

"ZEMS"
HERBAL LIQUORICE TABLETS

STOCKED
BY ALL LEADING
WHOLESALERS.

Prepd. by ZEMS LTD.
GLADSTONE LABORATORIES
113 PARK AVENUE,
WILLESDEN GREEN, N.W.10

AN IMPORTANT SELLING LINE FOR CHEMISTS

Jackson's

Centurion
EUCALYPTUS AND MENTHOL PASTILLES
6d. for Cold in Head - Clear Throat and Nostrils 6d.

Centurion
EUCALYPTUS AND MENTHOL PASTILLES
6d.

Centurion
EUCALYPTUS AND MENTHOL PASTILLES
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EUCALYPTUS AND MENTHOL PASTILLES
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HEARTSHAPED INDIGESTION TABLETS
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CURIOUSLY STRONG PEPPERMINT LOZENGES
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BRONCHIAL LOZENGES
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ANTISEPTIC THROAT PASTILLES
6d.

6d.

Centurion Series

11 popular Varieties of
LOZENGES & PASTILLES

4/- per doz.
12 doz. at 3/9
Display outers of 1 doz.

ERNEST JACKSON & CO. LTD., CREDITON & CREDITON DEVON

'Grams: Jackson, Crediton. **CREDITON, DEVON** Phone: Crediton 10
LONDON OFFICE: PLAINTRAIN PLACE, CROSBY ROW, BOROUGH, S.E.1. Hop. 2668

W.B.DICK & CO. LTD



BY APPOINTMENT TO H.M. THE KING

PARAFFINUM LIQUIDUM B.P.
ALL SPECIFIC GRAVITIES GUARANTEED TO REMAIN BRIGHT AT 0°C.

B.P. WHITE & YELLOW PETROLEUM JELLIES

WHITE AND HALF WHITE OILS

SEND FOR SAMPLES AND QUOTATIONS (WHOLESALE ONLY)

26 GROSVENOR GARDENS, LONDON, S.W.1
Telephone Sloane 3461 (7 lines)
Telegrams "Dicotto, Phone, London."
GLASGOW, LIVERPOOL, NEWCASTLE,
CARDIFF AND NEW YORK.

**See that you hold Stocks
of this
Safe & reliable Family Remedy**

ESTABLISHED OVER 80 YEARS
AND STILL IN UNIVERSAL DEMAND

**Dr. J. Collis Browne's
CHLORDODYNE**

ORIGINAL AND ONLY GENUINE

**80 YEARS'
WORLD-WIDE
REPUTATION**

Please order from your Wholesaler with
other goods

Sole Proprietors:

J. T. DAVENPORT LTD.
UNION STREET, LONDON, S.E.1

**SOLD ONLY
THROUGH
CHEMISTS
SIZES 1/3, 3/-**

32,000,000 WINDOWS TO YOUR SHOP



Large space 'ASPRO' advertisements are carried several times monthly by over 300 newspapers, with a total circulation of more than 32,000,000. They act as 32,000,000 effective windows for retailers who connect up by showing 'ASPRO' displays. To get the benefit of this stupendous advertising, as if you paid for it yourself, show 'ASPRO' display material prominently in your windows. People will come into your shop who would not otherwise have come. You will gain by increasing your sales of other lines in addition to 'ASPRO' sales. New designs for 'ASPRO' Window Displays are produced at frequent intervals. A typical display is illustrated herewith. Remember 'ASPRO' sales are continuous.

**SEND NOW FOR
NEW 'ASPRO'
DISPLAY MATERIAL**



'ASPRO' consists of the purest Acetylsalicylic Acid that has ever been known to Medical Science, and its claims are based on its superiority. No proprietary rights are claimed in the method of manufacture or the formula.

Made in England by **ASPRO LTD.**
Slough, Bucks. Phone: SLOUGH 608

ASPRO
REG. TRADE MARK.

'PETROLAGAR' BONUS OFFER

*Extra profits if you help us
to send you customers*

On our part we are making every effort—spending large sums of money to send you customers for 'Petrolagar.' Attract these customers to your pharmacy by displaying the attractive display card illustrated below.

In return for your co-operation in making this display we offer 13 to the dozen terms on 'Petrolagar' brand Paraffin Emulsion during the month of March.

Extensive advertising, direct mailings and personal calls by representatives are combining to increase 'Petrolagar' sales, while an additional campaign is being carried on to popularise the new 'Petrolagar' with Cascara.

Include 'Petrolagar' with Cascara in your orders on bonus terms.

Are your 'Petrolagar' sales increasing? If not, you are not obtaining your full share of this business. A display will help to rectify that.

PETROLAGAR LABORATORIES LIMITED
BRAYDON ROAD - LONDON, N.16



Terms of Bonus Offer

1. One 2/6d. bottle free on each dozen 2/6d. size 'Petrolagar.'
- Or One 4/6d. bottle free on each dozen 4/6d. size 'Petrolagar.'
2. Mixed dozens of large and small sizes do not qualify for bonus.
3. Bonus dozens may comprise any assortment of the four varieties.
4. Bonus orders will be filled by the usual wholesalers, who also supply bonus. Show material will be sent direct by 'Petrolagar' Laboratories Ltd.
5. In return for the bonus you make a fortnight's display of the showcard.

Old things are best.



For a thousand years Norwegian Medicinal Cod Liver Oil has been renowned as Nature's own cure.

**NORWEGIAN
MEDICINAL
COD LIVER OIL**

WORLD-FAMOUS FOR QUALITY



UTEN'S EPILEPTIKUM**FOR NERVOUS CRISES & EPILEPSY**

This Continental remedy has had striking success during the last fifty years. The number of patients treated is sufficient proof of its efficacy. Made in four strengths of graduated concentration. Price 8/- per bottle. Utén's Tea 1/6 per packet.

SPECIAL INTRODUCTORY OFFER

We will send two bottles of Epileptikum and one packet of Tea, free of charge, to any Chemist on application. Write to

J. BOULTON, ENGLISH & FOREIGN PHARMACIES,
25 GUILDHALL ST., FOLKESTONE.

**NOW IS THE TIME TO ORDER
DOLS' VOLATALISE FLANNEL**

The Wonderful Remedy for RHEUMATISM, NEURITIS, SCIATICA, etc.
Write to DOLS' VOLATALISE FLANNEL LTD., VIADUCT ST., HUDDERSFIELD

**MAWSON
FILTERS**

always give satisfaction. They eliminate all risk of water contamination. Simple in construction, they do their job efficiently at a minimum cost. They have a world-wide reputation. May we send you our descriptive list? Overseas enquiries specially invited.

The MAWSON FILTER Co., 20 Grainger St. W., Newcastle-on-Tyne

**IN GREAT DEMAND
"BARLOVA"**

The nourishing food-beverage "BARLOVA" is a delicious beverage prepared from the best Malt—Milk and Eggs

Retails in three sizes:—
Price 6d., 1/3, and trial size 3d.
Your wholesaler stocks, include a trial dozen with your next order, or write us to-day for trade samples.
Ample advertising, printed literature and window display material available.

NOBBY'S PRODUCTS Ltd.
HYDE, CHESHIRE
Phone: Hyde 329

BARLOVA
FOOD DRINK OF HEALTH

"CLARKES"

Brand

World-famed Blood-purifying Medicine

"BLOOD MIXTURE"

Registered Trade Mark

UNSTAMPED, FOR SALE BY CHEMISTS ONLY

P.A.T.A. PRICES

"CLARKES" Brand **BLOOD MIXTURE**
(Liquid and Tablets)

Retail 3/-. 3 doz. lots £4-4-0 less 3 3/4% one month
12 " " £16-16-0 " 8 3/4% " "
CARRIAGE PAID PACKING FREE

ASSORTED ORDERS

	Retail	Per Doz.
"CLARKES" Brand	1/9	16/4
"BLOOD MIXTURE" (Liquid)	3/-	28/-
" " "	12/-	112/-
"BLOOD MIXTURE" (Tablets)	1/9	16/4
" " "	3/-	28/-
" " "	5/-	46/8
SKIN LOTION	1/3	11/8
SALVE	1/3	11/8
" "	3/-	28/-
" "	5/-	46/8
APERIENT PILLS	1/3	11/8
" " "	3/-	28/-
MEDICATED SOAP		
Box 3 Tablets	2/6	7/10
Single Tablets	1/-	

Orders may be assorted as desired at above rates provided they reach minimum values, as follows:—

£4 - 4 - 0 less 3 3/4% one month

£16 - 16 - 0 " 8 3/4% " "

CARRIAGE PAID PACKING FREE

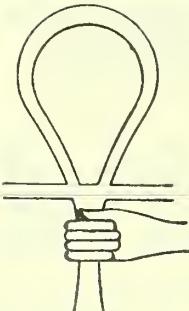
ORDERS may be sent direct or through the usual wholesale houses

**The Lincoln & Midland Counties Drug
COMPANY, LIMITED**

PARK STREET, LINCOLN

Telegrams: "Lindum, Lincoln" Telephone: Lincoln 55

February 29, 1936



HYPODERMIC NEEDLES

of all descriptions

WHOLESALE & EXPORT ONLY

EVERETT & CO.

939 London Road, Thornton Heath, London, S.W.16

Armstrong's

TAPER  CORKS

ARMSTRONG CORK CO. LTD.,
ALDWYCH HOUSE, LONDON, W.C.2

SOUTHALL'S
SANITARY TOWELS



All the year round publicity, appearing in virtually every newspaper and magazine read by women, ensures steady sales to the dealer who stocks Southall's products.
The "ORIGINAL" and most popular.
The "CELTEX" soluble, easily disposed of.
The "K" made entirely of absorbent cotton wool, with very soft cover.
The "COMPRESSED" for travelling. A very popular line.

SOUTHALLS (BIRMINGHAM) LTD.

SOL-VO

REDUCTION
IN PRICES

3 Doz. @ 5/- Doz.
6 Doz. @ 5/- Doz.
1 Gross @ 5/- Doz.

CARRIAGE PAID
NET



FORD, SHAPLAND & CO. Ltd.
GT. TURNSTILE, HIGH HOLBORN,
LONDON, W.C.1
Telephone: Holborn 4695

Pharmaceutical

CASTOR

PREMIER

OIL

Tasteless
Water-White
Made in England by
**THE PREMIER OIL
EXTRACTING MILLS**
HULL

Telegrams: "Premier, Hull" Telephone: 15191 (8 lines)

Unsurpassed for Quality & Value . . .

'Marvo' Regd. TOILET ROLLS

FIXED PROTECTED SELLING PRICE

4½ D. PER ROLL

Our bonus offer brings you 46½⁰/₃% PROFIT ON THE SELLING PRICE OF A GROSS.

DISPLAY MATERIAL New showcards to make effective counter and window displays may be obtained FREE from your usual WHOLESALE.

ENTIRELY BRITISH MADE

4½ D. MEDICATED TOILET ROLL

Between February 1st and March 14th, we are making a generous introductory BONUS OFFER in return for a 4 weeks' window display. For every 4 dozen rolls ordered (up to a maximum of 1 gross) we give you 1 dozen rolls absolutely free, bringing your net profit to the amazing figure of 46½%! MARVO is a toilet paper which, in your customers' interests, you ought to recommend. Doctors estimate that a large proportion of the public suffers from rectal ailments, and the regular use of MARVO, an entirely new, unglazed paper, largely obviates these painful troubles. MARVO, most economical in use because of its wonderful absorbency, is made entirely in England from the pulp to the finished product. Free sample roll will gladly be sent on application.

Manufactured by the makers of SAMARITAN Toilet Rolls: ST. ANDREW MILLS, LTD., London, E.17

M.2

"SURCO"
RELIABLE
ELASTIC HOSIERY

SEAMED & SEAMLESS

For special garments to measure we maintain a 24 hour service.

:: BODY BELTS ::
TRUSSES :: SUNDRIES

Write for Catalogue.

SURGICAL HOSIERY CO. LTD.

Russell Street :: NOTTINGHAM

Telephone No.: 75903.

Telegrams: SURGICAL, NOTTM.

ZEAL

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The CHEMIST AND DRUGGIST

SUPPLEMENT

This Supplement is inserted in every copy of The Chemist & Druggist

28 ESSEX STREET, LONDON, W.C.2

FEBRUARY 29,
1936.

ADVERTISEMENT TARIFF

ALL ADVERTISEMENTS are PREPAID, so that remittance must accompany instructions in each case. If it be necessary to telephone or telegraph an urgent announcement this may be done, provided the money is telegraphed at the same time.

BUSINESSES WANTED and for **DISPOSAL, PREMISES TO LET and FOR SALE, PREMISES WANTED, PARTNERSHIPS, GOODS for SALE and AGENCIES**—6/- for 50 words; every additional 10 words or less, 6d. (Box No., 1/- extra.)

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2.—LONDON, S.E.—Good-class Retail Business with small Panel; steady turnover, 1935 being £1,539; Chartered Accountants' figures; comfortable living accommodation; garage and garden; rent £75; price £1,050 all at or £350 for goodwill plus stock and fixtures at valuation.

3.—TOTTENHAM.—General Retail Business; present takings between £25 and £28 per week plus N.H.I., about 250 scripts; good profits; rent £120; part of living accommodation sublet at £1 12s. weekly; long lease; price £450 for goodwill and fixtures plus stock at valuation.

4.—SOUTH LONDON (GOOD-CLASS SUBURB).—High-class Retail and Dispensing Business; established many years; returns exceed £3,000 per annum, increasing; attractive shop; excellent position; reasonable purchase price; further details on application.

5.—VICTORIA (NEAR).—Family Retail Business; established over 50 years; returns (1934) £1,516; gross profit £455; stock and fixtures worth about £600; reasonable rent and rates; price £750 or near offer.

6.—LONDON, NORTH-WEST (SUBURBAN).—Middle-class Business with small N.H.I., occupying good position in busy main road; returns steadily increasing, at present £36 per week; stock worth about £450; good fixtures; upper part at present sublet, but possession could be obtained; genuine reason for disposal; further particulars on application.

7.—HENDON.—Good-class Retail Business with Post Office; returns last year about £850 with gross profit about £350; present income from Post Office about £1 per week; district is growing rapidly and the business should benefit; good living accommodation with garden; stock and fixtures worth about £480; offers invited.

8.—LONDON.—Messrs. Ascents Pharmacies (1933), Ltd., are prepared to dispose of a number of their businesses on a part-payment basis; initial instalment £50 to £100; full details upon application.

9.—SURREY.—Middle-class Retail and Dispensing Business showing net profit of about £400 per annum; good living accommodation with garden and room for garage; reasonable rent; long lease; price £950 all at or valuation terms entertained.

10.—FOREST GATE.—General Retail Business with Panel Dispensing; returns between £1,350 and £1,400 per annum; low rent; long lease; price about £750 or valuation terms entertained.

11.—BUCKINGHAMSHIRE.—Good-class Business with Dispensing and Photographic; returns for year recently completed between £2,400

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12.—HAMPTON COURT (NEAR).—Good Middle-class Dispensing Business offering scope for increase; returns exceed £1,100 per annum; good clean saleable stock worth about £400; modern flat over with garden; reasonable rent; long lease; offers invited.

13.—KENT.—Middle- and Working-class Business; returns show a steady increase, at present over £1,200 per annum; double-fronted shop in main road; low overheads; price £550 all at.

14.—HAMPSHIRE.—Good-class old-established Business with excellent Summer Trade; returns last year £1,770; scope for great improvement; stock and fixtures worth about £1,200; terms, £50 for goodwill plus stock and fixtures at valuation; rent £86; held on lease.

15.—LIVERPOOL.—Middle-class Business; established many years; returns (1935) £1,530; stock and fixtures worth about £800; living accommodation, garage and large shed; price of business £975 or near offer; property may also be purchased; ill-health cause of sale.

16.—MIDLANDS (IMPORTANT CITY).—Old-established business, returning over £40 per week, for sale on account of Vendor's ill-health; premises can be purchased or a lease will be granted at a reasonable rental; terms, valuation of stock and fixtures, plus £200 for goodwill; early sale desired.

17.—PORTSMOUTH.—Middle-class Family Retail Business returning nearly £1,400 per annum; net profit £350; good living accommodation over; reasonable rent, stock worth about £550; price asked £1,000 all at or valuation terms entertained.

18.—BEDFORDSHIRE.—Good-class Retail Business with Private Dispensing and N.H.I. about £5 monthly; well established; returns under management last year £1,527; main-road position; rent £78; stock and fixtures worth about £700; valuation terms entertained.

19.—HORSHAM.—Middle-class Cash Retail Business; present returns at the rate of £1,250 per annum; net profits about £300 per annum; spacious living accommodation; stock and fixtures worth over £450; nominal sum for goodwill plus valuation of stock and fixtures; offers invited.

20.—ESSEX (SEASIDE).—Old-established main-road business; returns under management exceed £1,550 at good prices; stock and fixtures worth between £600 and £700; long lease; price asked £250 for goodwill, plus stock and fixtures at valuation; net profit to owner-manager about £300 per annum.

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(C1) COUNTY DURHAM.—Old-established family and dispensing business, occupying corner position in main thoroughfare; turnover for 1935 financial year upwards of £2,500, with scope for considerable further increase; at present under management; accountants' figures available; rent £100 per annum, rising to £130; lock-up shop; price about £1,700, including stock approximately £800.

(C2) NORTH SCOTLAND.—Old-established dispensing business for disposal owing to ill-health and contemplated retirement; property also available, or five-year lease would be granted, with option to purchase; present returns approximately £1,100 per annum; net profit about £400; excellent scope for further considerable development; good living accommodation; very reasonable purchase price.

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(C4) LINCS. (MARKET TOWN).—Mixed retail business with some wholesales trade, for disposal owing to retirement; turnover at present approximately £2,000 per annum; rent £75, including living accommodation; premises situated in main street; scope for considerable further development; established nearly 150 years; price £800 or near offer.

(C5) CROYDON.—Established middle-class business, with good living accommodation, including garage and garden; returns for last financial year, £1,201; net profit £300; rent £80; premises situated in main shopping road of congenial residential area; price asked, £825 or near offer.

(C6) DARWEN.—Old-established pharmacy with living accommodation, at present used for storage purposes, situated in main shopping thoroughfare; turnover for 1935, £1,150, but scope exists for substantial increase over these figures; rent £60; lease 19 years unexpired; value of stock and fixtures only will purchase; further details upon application.

(C7) BIRMINGHAM.—Unopposed middle-class business, with sub-post office, can be acquired at low figure for quick sale; now in hands of Trustee; less than three years ago the returns averaged approximately £2,000 per annum; now doing between £20 and £25 weekly, but these figures are capable of early substantial increase; further details upon application.

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3.—SURREY (Suburb).—Good-class Family Retail, in growing district; return £30 weekly under manager, scope for increase; modern well-fitted shop; good stock; price £875 or near offer.

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5.—GLOUCS.—Sound Light Cash Retail; returning over £900, increasing; modern fitted shop, with house attached; rent £40; long lease; stock worth £250; price £400, books audited.

6.—BOURNEMOUTH.—Old-established Business, with valuable Proprietaries; returns about £1,000 under indifferent management; good profits; low overheads; main-road position; owner retiring; price £575.

7.—HORNSEY.—Old-established Business, with large Panel; returns about £1,500; neglected; plenty of scope; good position; stock worth £570; owner retiring; offers invited; personally recommended.

8.—LONDON, S.W.—Well-established Light Suburban Retail; returns approach £1,000, good profits; books kept; nice house, low rent; stock worth £350/£400; price £625, or near offer.

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(C9) WESTCLIFF.—Splendid opportunity for enterprising chemist to acquire good progressive family business in prominent residential district; accountants' figures; turnover for last financial year, £1,363; net profit, £335; rent £100, including good house; immediate sale desired, and owner will sell at sacrifice figure; part of purchase-money could probably be raised on loan if necessary.

(C10) DEVON (CATHEDRAL CITY).—Branch pharmacy with excellent scope for increase under personal proprietorship; now doing approximately £25 per week; situated in main street; rent £130 per annum; price all-at £750.

(C11) LONDON, S.W.1.—Old-established family business offering good scope for further development over the present returns, which for the last financial year amounted to £1,516; rent £95; lock-up shop; owner will accept sacrifice figure of £750, including stock and fixtures £600, as he has purchased another business, and wishes to sell as quickly as possible.

(C12) ACTON.—Pharmacy with flat above (optional) situated in busy shopping street; genuine scope for early substantial increase under personal proprietorship; present turnover £20/£25 weekly; rent £80 per annum, including rates; price for quick sale £550, including stock, £400.

(C13) MIDDLESEX (OUTER SUBURB).—Main road middle-class business, with five-roomed house above; turnover for last financial year, £1,580 net profit £383; low rental; accountants' figures; price about £700 all-at; genuine reason for selling.

(C14) LEYTON.—Unopposed pharmacy, with good house, including garden; neglected for some considerable time, but is now making steady progress, and should shortly be showing a substantial increase over the present turnover, which averages approximately £14 per week; reasonable rental; long lease; price £180, including stock £110; further particulars upon application.

(C15) ACTON.—Drug store with good living accommodation, including four bedrooms; turnover for last financial year, £700, but it is considered that these figures would more than double themselves under qualified proprietorship; no opposition; price £350 all-at.

(C16) HORNSEY (NEAR).—Good family business, in present hands 40 years; large panel; turnover now approximately £1,500 per annum, with plenty of scope for further increase; self-contained house; owner retiring; £300 is asked for goodwill, plus value of stock and fixtures; open to offer.

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BRADFORD, YORKS.—Old-established Drug Store Business for sale; good opening for Qualified Chemist; clean stock; wine licence (Manchester); Photographic; stock, fixtures, fittings, all at £350; good living accommodation, electric; rent, house and shop, 14s. weekly, or would sell property. 163/2, Office of this Paper.

HAMPSHIRE.—In rapidly developing district of Seaside Town; Cash business; well stocked; National Health Insurance; Kodak agency; turnover last year £1,400; premises (which include good living accommodation) on lease; rent, £120 per annum. Price, £800. Apply 162/19, Office of this Paper.

LONDON, S.E.—Drug Stores, good working-class district; big possible N.H.I.; long lease, low rent; has been under indifferent unqualified management; this is a genuine and an excellent opportunity for a young Pharmacist; takings £600 per annum; price £200 all at. Apply 163/15, Office of this Paper.

NORTH LONDON, 10 mins. from Golders Green.—High-class Family Dispensing Business; lock-up main-road shop; rent and rates 45s.; open nearly 3 years; nicely fitted and well stocked; never loses a sale; high average per customer and no bad debts; long lease; accountant's figures; turnover last six months £883 (£34 per week average); 36 per cent. gross profit; private dispensing from nine doctors within a few yards; proposed Tube extension and blocks of good flats will benefit; excellent scope for Optics, Kodak, Rexall and Ucal Agencies; wonderful opportunity to acquire steadily increasing business; price £1,150; genuine reasons for disposal. Apply "Chemist," 35 Hoop Lane, N.W.11.

TYNESIDE.—Pleasantly situated Suburban Business for sale; takings, £1,200 under management, with scope for substantial increase; modern house, garden, garage; rent, £70; no opposition. Price, £675. 162/11, Office of this Paper.

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HOUSE and Shop for Sale; suitable Chemist (semi-retirement) or Chemist-Hairdresser; next sub-post office; Yorks market town suburb; nearest opposition one mile; present Drug and Drapery; price £850 net. 161/3, Office of this Paper.

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IPSWICH.—Nearly 100,000 Population. Shop 28 ft. by 20 ft., in best trading position, suitable for Chemist; rent £250. Oxborrow, Son & Morgan, Auctioneers, Ipswich.

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THE COMMITTEE OF VISITORS invite TENDERS for the supply of DRUGS and DRESSINGS for the SIX MONTHS ending 30th September, 1936:—

For Form of Tender apply, enclosing stamped addressed envelope, to the Clerk of the Hospital, Severalls, Colchester.

Sealed tenders must be received NOT LATER than 14th MARCH, 1936, addressed to The Committee of Visitors, Severalls Mental Hospital, Colchester.

The Committee do not bind themselves to accept the lowest or any tender.

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EGYPT-SOUDAN.—British firm having sound and long-established connections seeks Sole Agency for Pharmaceutical Products of repute; Proprietary Remedies, Restorative Wines, Surgical Dressings and allied products; services of keen and alert organisation ensure excellent prospects of increased business; first-class firms only required; references exchanged. P.C.B. 194/23, Office of this Paper.

FRANCE.—British firms who wish to exploit the following branches in France—Fine Drugs, Pharmaceutical Specialities, Beauty Products—are invited to get in touch with Laboratoires Industriels de Massy, Massy (Seine et Oise), France; offices in Paris; depot, representatives all over France; advertising department; sale through retailers or by mail order.

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RETAIL Pharmacist in large Lancashire town wishes to act as Distributing Agent for a number of well-known Proprietary lines, Pharmaceutical, Toilet or Photographic; ample stock room; terms to be arranged. 163/1, Office of this Paper.

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ACTIVE Chemist, F.C.S., M.P.S., wishes partnership or directorship in sound Manufacturing Business. Advertiser has 30 years' experience in Retail and Wholesale, controlling large staffs, Buying and Travelling departments; also successful experience in Financial Control, Costings, Overheads and Advertising; adaptable to conditions and has proved effectual in increasing net profits and new developments; would invest reasonable amount, with option to increase. 275/919, Office of this Paper.

PARTNERSHIP.

PHARMACIST, middle-aged, with capital, wishes to contact with a younger qualified man with capital, to purchase retail Chemist's Business in or near London, on a private limited company basis. Please give full details, stating amount of capital available. BM/HPTG, London, W.C.1.

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APPRENTICE wanted in old-established Business; registration essential, and student with Part I preferred; good training and experience; time given for evening classes. W. Reeves, M.P.S., F.B.O.A., 81 Cornwall Road, London, W.11.

SITUATIONS OPEN.

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6s. for 40 words or less; 6d. for every additional 10 words or less, prepaid. (Box No. 1s. extra.)

BRIGHAM.—Qualified Assistant required, under 35; must be thoroughly reliable; a good counterman, and prescriber; tactful Salesman. Apply, with full particulars, Smithsons, Preston Circus, Brighton.

BRISTOL.—A young Qualified Assistant to act as Manager, under supervision; state salary required (moderate); experience and references. 274/910, Office of this Paper.

LANCS.—Qualified Lady or Gent. required in March for management of small branch in new district. State age, salary required and full particulars to 163/18, Office of this Paper.

LONDON COUNTY COUNCIL.—Pharmacists (men or women) holding Certificate of Pharmaceutical Society of Great Britain, to act as Assistants to other Pharmacists, required at: (1) Hammersmith Hospital, Ducane Road, W.12; (2) Lambeth Hospital, Brook Street, S.E.11; (3) Queen Mary's Hospital for Children, Carshalton, Surrey; (4) St. Alfege's Hospital, Vanbrugh Hill, Greenwich, S.E.10; (5) St. Giles' Hospital, Brunswick Square, Camberwell, S.E.5; and St. Mary Abbots Hospital, Marloes Road, W.8 (part time at each); (6) Bethnal Green Hospital, Cambridge Road, E.1, and St. Andrew's Hospital, Devons Road, Bow, E.3 (part time at each). Salary, £225-£10-£275. In case of women, marriage terminates contract of service. Forms of application (stamped addressed envelope necessary) obtainable from Medical Officer of Health (S.D.3), County Hall, S.E.1, returnable by 14th March. Canvassing disqualifies.

LONDON.—Wanted, Qualified Man (25-35) with Optical qualifications; must be a quick, accurate Dispenser; Counter and Window-dressing essential; good wages for right man. Apply, with references, to Arnett & Co., 317 Lillie Road, Fulham, S.W.6.

MANCHESTER.—Pharmacist required for branch. State age, experience, salary, etc., and please state when free. 274/915, Office of this Paper.

NORTH FINCHLEY.—Required, Young Lady (Unqualified) (age 18-26), experienced, for Perfumery Counter; no Dispensing; highest references. Write, with full particulars, to 275/923, Office of this Paper or 'phone Hillside 1188.

CHEMIST-OPTICIAN or Chemist with knowledge of Optics required immediately. Apply Optical Society, 38 Westgate Chambers, Newport, Mon., stating age, height, qualifications and experience. If possible enclose a photograph; salary payable monthly; commission payable quarterly; state salary required.

JUNIOR Assistant required (about 21), either sex; knowledge of Dispensing and Counter work; Loudon suburb; state experience and salary required. 163/16, Office of this Paper.

MANAGER, Qualified, live in, required for Good-class Family Business near Twickenham. Write, stating age, experience, salary required and when free, to A. Farmar, 134 Hook Road, Surbiton, Surrey.

MESSRS. HANFORD & DAWSON, LTD., High-class Dispensing Chemists, 1 Station Bridge, Harrogate, will shortly have a vacancy for an Apprentice holding the necessary educational certificate.

QUALIFIED Assistant for N.H.I. Dispensing and Counter, working-class district, North London; permanency for a man not afraid of work; wanted in April (age 35-40 years). Please state height, age, salary, experience, etc., to 163/3, Office of this Paper.

QUALIFIED Lady wanted for branch; Counter, Window-dressing, etc.; no Sunday duty. Brumwells, 72 Euston Square, London, N.W.1.

QUALIFIED Pharmacist; capable taking charge West-End branch; must be reliable Dispenser; knowledge Photographics; excellent Window-dresser; ample scope; prepared to wait for really ambitious man; permanency; applications unanswered seven days respectfully declined. Fullest particulars first letter to Staff Manager, Cassie & Co., 103 Newgate Street, E.C.1.

THE Nottingham Co-operative Society, Ltd., require the services of a young fully Qualified Chemist; must be quick and accurate dispenser; accustomed to modern business methods, and quick counter work; knowledge of optics an advantage but not essential. Applications stating age, qualifications, experience, salary required, and also copies of references to the Managing Secretary, Nottingham Co-operative Society, Ltd., Upper Parliament Street, Nottingham, endorsed "Chemist."

UNQUALIFIED Junior (male) Assistant required for Pharmacy; one with Warehouse experience preferred. Applicants to state age, experience and salary required, and enclose copies only of testimonials by March 4, to General Secretary, Scunthorpe Co-operative Society, Ltd., 180 High Street, Scunthorpe, Lincolnshire.

UNQUALIFIED Junior required short; state salary, experience, when free and full particulars; photo if possible. C. Bayley, 25 Connaught Avenue, Frinton-on-Sea.

UNQUALIFIED Young Lady Assistant required for Stamford Hill district; please state age, height and salary required, giving details of experience and enclosing photograph, if available, to be returned; references will have to bear the strictest investigation. Secretary, Churchills Chemists Ltd., Head Office, 350 High Road, N.17.

WANTED.—Qualified Assistant (male); reliable Dispenser, good Salesman and Window-dresser. Apply, stating age, wages and experience, giving two names as references, not later than Saturday, March 7th, 1936, to General Manager, Brighouse District Industrial Society, Ltd., King Street, Brighouse.

WANTED.—Qualified Lady Chemist to take charge of Pharmacy Department in large Departmental Store; N.H. Prescriptions made up; average takings £25 per week. Apply, stating age, qualifications and wages required, to General Manager, Co-operative Society, Ltd., Witham, Essex.

PHOTOGRAPHS, TESTIMONIALS, &c.

When answering advertisements in this section applicants are strongly advised not to send (unless specially requested) ORIGINAL TESTIMONIALS or VALUABLE PHOTOGRAPHS. As can be readily understood, when an advertiser receives from 100 to 150 replies the task of returning photographs, testimonials, &c., is one of some difficulty.

YOUNG Lady required for Toilet, Perfumery and Beauty Preparations, and to assist at the Chemist Counter; North London. Apply 162/4, Office of this Paper.

£300-£350 PER ANNUM.—A really exceptional position for Qualified Chemist-Optician (F.S.M.C. or F.B.O.A.) (25-37) vacant shortly; entire control Optical side, with liberal commission; real scope for increase; must be used to and like brisk Counter work; house available at reasonable rent if married; up-to-date pharmacy and apparatus; Midlands; send fullest particulars, photograph, height, references. 162/20, Office of this Paper.

WHOLESALE.

LANCASHIRE.—To anyone having a connection amongst Chemists and Shopkeepers in this area and who can influence the sale of a well-known Proprietary line is an excellent opportunity to earn a liberal commission; only those qualified to act in this capacity need reply, and references will be required. 275/920, Office of this Paper.

LONDON.—Keen Representative required on commission basis to carry Denergum Antiseptic and Sae-Sal Brand Nerve Tablets; must have connection. Write, stating age and experience, to J. G. Hook, 18 Abingdon Street, Westminster, S.W.1.

ALL COUNTIES.—Required, diligent Representatives for good selling Summer Line on 10 per cent. commission basis; expenses will be paid in addition if sales are satisfactory; send full particulars and districts covered. 160/6, Office of this Paper.

ASSISTANT for Chemical Works; London; car driver preferred; state particulars. 274/906, Office of this Paper.

FOREMAN for "Dries" Department; good knowledge of Herbs, Roots, etc., essential; Counter Hand for Wets Department; only those with some years' experience in Wholesale houses need apply. H. Read, c/o Hirst, Brooke & Hirst, Ltd., Leeds.

MANUFACTURERS of Fine Pharmaceuticals for the Medical Profession require the services of a Sales and Propaganda Executive to work under Sales Director; a good knowledge of Ethical Propaganda and ability to write convincing ethical propaganda is essential. Write, giving full experience, age and salary required. 160/3, Office of this Paper.

MEDICAL and Veterinary Salesmen required for Scotland, Ireland, Northern, Southern and Midland areas of England; applications only considered from gentlemen of ability and experience. W. M. P., 275/921, Office of this Paper.

OLD-ESTABLISHED Printers, specialising in all classes of work for Chemists, Druggists and Medical Profession, require Representative for the Provinces; one with experience in Retail Chemists' business preferred. Write, stating age and experience, 274/917, Office of this Paper.

REPRESENTATIVE, keen, young, wanted, full-time, for Midlands, Lancs and Yorks by old-established French Perfumers; applicants to be interviewed in London, Birmingham or Manchester; own car essential, and good connection Chemists and Hairdressers. Write fully, stating age and experience, enclosing photograph, to 274/908, Office of this Paper.

REPRESENTATIVE required to take up, as a sideline, the sale of Films to Chemists, Druggists, Hairdressers, etc.; anyone with a connection, Wholesale or Retail, please communicate; excellent article; well advertised. Apply 274/911, Office of this Paper.

REPRESENTATIVE wanted, with good connection in Lancashire, for new Proprietary Line to Chemists; same will be well advertised; wage and commission; two references required. 274/905, Office of this Paper.

REPRESENTATIVES wanted for well-known Nationally Advertised Line sold by Chemists; vacancies open for Midlands, South Wales, Northern Counties and West of England; salary and commission; no objection to carrying additional non-competitive line; only energetic men need apply. Write in confidence, stating age, experience, if travelling by car, etc., 274/909, Office of this Paper.

REQUIRED.—Junior Shorthand-Typist for London Wholesale Druggists. Apply by letter, giving full particulars, age and salary required, to 274/897, Office of this Paper.

SIMPKINS Chemists' Confections.—Notice is given that a vacancy is being created for Representation in London, S.E., and Kent, for resident owner-driver. Full details, including age, experience and sales records, to Hunter Road, Sheffield, 6.

THERE is a Vacancy for an Energetic Representative with a good connection among Doctors and Chemists, to travel in Great Britain for an old-established British house; applicants should not exceed 35 years of age, and must give full particulars of their experience (which will be treated in confidence), at the same time stating salary required. 274/914, Office of this Paper.

TRAVELLER required, with experience in selling Perfumery and Toilet Lines to High-class Stores and Chemists in London area; must have good connection, successful record and be able to influence a good volume of business; excellent opportunity for first-class man. Write fully Box 571, Samson Clark's, 57 Mortimer Street, W.1.

TRAVELLER wanted to carry an easy selling side-line on commission; no sample to carry. Apply Druiff, 14 Frith Street, Soho. Phone: Gerrard 4739.

TRAVELLERS calling on Chemists can make their costs by selling a special Cleaning Preparation on a commission basis; this preparation really cleans any fabric without leaving a ring around the area of application; the price is within the reach of all. Write, stating areas covered, etc., to Box 638, Samson Clark's, 57 Mortimer Street, W.1.

WELL-KNOWN Distributors handling widely advertised products require Representatives with long-standing connection amongst Chemists and Druggists for the following territories: Dorset, Devon, Cornwall; Cumberland, Westmorland, Northumberland, Durham; Yorkshire; Herts., Worcs., Warwicks.; Derbyshire, Staffs., Notts., Lincs., Leics. on excellent commission basis only; car owners preferred; reply stating territories in which interested and in confidence firms you now represent. 274/913, Office of this Paper.

COLONIAL, INDIAN AND FOREIGN

SOUTH AMERICA.—Young, healthy Qualified Man wanted for Bolivia; good climate, high altitude, so sound heart necessary; intelligent, competent, trustworthy, and capable of taking charge; must learn Spanish; 3 years' agreement at £25, £30, £35 and furnished room; passage paid out and home. Give very full particulars, with photo, in first instance to 275/922, Office of this Paper.

SITUATIONS WANTED.

RETAIL (HOME).

2s. for 18 words or less; 6d. for every additional 10 words or less, prepaid. (Box No., 1s. extra.)

A.A.A.—QUALIFIED Lady (26); London management experience; reliable Dispenser; live Counter Sales; salary £24. "Chemist," 13A Torrington Place, W.C.1.

A.A.—ASSISTANT, Unqualified, seeks post, West End, City, S.E. London; capable; Salesman, Window-dresser; Dispenser, Photography. "Craford," 54 Hudson Road, Plumstead, S.E.18.

A THOROUGHLY experienced Assistant (Lady) requires berth, West End and suburbs; conscientious and reliable; quick and accurate Dispenser (used to N.H.L.). Holmes, Lewis House, New Kent Road, S.E.1.

A S Manager, locum or part time; Qualified; 20 years' managerial experience; undeniable references; disengaged. "M.P.S.," 34 Cornwall Road, Ruislip Manor, Middlesex.

A SSISTANT; accustomed to manage; Dispenser, Salesman; single; active; elderly, unregistered. "Statim," 38 Felcote Avenue, Ravensknowle Road, Moldgreen, Huddersfield.

A SSISTANT Dispenser (Lady); disengaged; Hall qualification; experienced; keen worker; Brighton or near. 8 Prestonville Road, Brighton, 1.

A SSISTANT, Unqualified; thoroughly experienced Dispensing and Counter; locum or permanency; disengaged. F. Ham, 10 Disraeli Road, Putney, S.W.15.

A SSISTANT (50), Qualified, single, desires post; suburbs or London; Dispensing, N.H.L.; or part time; good reference. P.C.B. 194/20, Office of this Paper.

A SSISTANT (25), Scot; unimpeachable references and character; West-End experience; good appearance, personality. Steven, 32 Raul Road, Peckham, S.E.

ASISTANT (26), Unqualified, gentleman; thoroughly experienced; Dispensing, Counter, etc.; excellent testimonials; disengaged. "Assistant," 44 Meads Lane, Seven Kings, Essex.

ASISTANT (29), Unqualified, 12 years' experience Dispensing and Counter, seeks Retail or Wholesale post; disengaged. Davey, 36 Marlborough Road, Hillingdon, Middlesex.

CHEMIST, experienced, excellent Prescriber, disengaged, desires Management or Senior; London or provinces; moderate salary. "Chemist," 46 Buckley Road, London, N.W.6.

CHEMIST (28) desires position high-class Pharmacy in City; previous experience; excellent references; moderate salary if position progressive. Apply 163/17, Office of this Paper.

CHEMIST-OPTICIAN (25), Retail, Hospital, some Manufacturing experience, seeks locum or permanency; Provinces preferred for locumries. Apply "R. J." 25 Hungerford Road, Holloway, London, N.7.

DISENGAGED, locum or relief; experienced; competent Salesman; Dispensing, Prescribing, Photography or P.O. work. Chemicus, 56 Rudloe Road, Balham, S.W.12.

DISPENSING or Relief, Qualified; experienced; part-time, temporary, permanent; accustomed sole management; moderate terms; well recommended. "Chemist," 8 Abbey Road, E.2.

ELDERLY Unqualified Manager as Drug Store or Doctor's Care-taker; good Dispenser; active; wife good cook, etc.; low wage; highest references. "Dispenser," 22 Jubilee Road, Doncaster.

EXPERIENCED Assistant (45), Unqualified; tall; thorough knowledge all duties; accustomed to manage and staff control; conscientious, trustworthy; permanency desired; urgent. Haigh, 25 Hetley Road, Shepherd's Bush, W.12.

EXPERIENCED Lady Dispenser-Book-keeper (Hall) requires post in or near London. Miss Thompson, 197 Station Road, Harrow.

EX-SERVICE, Unqualified; well up in Stock-keeping, Sales, Windows, Photography; a worker; perm. or locum. Whyatt, 5 Cameron Road, Ilford, Essex.

HALL Dispenser, with Matriculation, distinction Chemistry, requires post; Doctor, Dentist, Chemist, etc.; small salary. 27 Street Lane, Leeds.

KEEN Chemist desires post; thorough experience of Veterinary work, D. and P. and Hospital; trustworthy, conscientious; disengaged. J. Gibby, M.P.S., Royal Exchange, Clynderwen, Pembs.

LADY as Assistant Dispenser to Chemist or Doctor, Unqualified; seaside or country preferred; disengaged. M. S., 107 Shirley Road, Southampton.

LADY Dispenser-Book-keeper (Hall), 8 years' experience, desires position; any part; live in or out; moderate salary. 163/26, Office of this Paper.

LADY Dispenser-Secretary desires post; good experience Firm, Private Practice, Hospital; Secretarial work preferred; Book-keeping, Typewriting, etc.; near London. 162/26, Office of this Paper.

LADY Dispenser (20), Hall Certificate, seeks post with Doctor, Chemist or Hospital. Gibbard, 6 St. Michael's Avenue, Pontardulais.

LADY requires post as Dispenser; knowledge of Book-keeping, Shorthand and Typing; drives car. 158/7, Office of this Paper.

LADY (24), Qualified, seeks change; good all-round experience; London or Home Counties preferred. 162/10, Office of this Paper.

MANAGER or locum; all-round experience; Dispensing, Photography, good Counterman; Lancashire or Midlands; moderate salary. "Pharmacist," 172 St. Annes Road East, St. Annes-on-Sea.

MANAGER or locum; middle-aged; Scotch; abstainer; good Dispenser; good Counterman; excellent references; moderate salary. Adamson, 39 Argyle Gardens, Upminster.

M.P.S., F.S.M.C.—Manager (28) desires change; married; accurate Refractionist; conscientious and trustworthy. 162/17, Office of this Paper.

M.P.S., F.S.M.C. (28) requires position; thoroughly experienced in all branches of Pharmacy, Optics and Photography; expert Refractionist; used to managing large business; single; total abstainer. 162/1, Office of this Paper.

M.P.S. (24) requires position as Assistant or Manager; well recommended; good all-round experience in all branches; disengaged; moderate salary. J. S., 8 Blairgowrie Road, Plymouth.

PHARMACIST, Manager, locum or part-time. Beck, 193 Harrow View, Harrow. Phone: Gerrard, 1699.

QUALIFIED Chemist desires position as Manager or locum; comprehensive all-round experience of Dispensing, Photographic and Prescribing Businesses; experienced in opening and developing new businesses; available immediately. The Croft, Old Farm Road, Withdean, Brighton.

QUALIFIED Chemist, elderly, active, reliable, trustworthy, seeks suitable permanency or locum; terms reasonable. 163/28, Office of this Paper.

QUALIFIED Manager (25), West End and City experience, seeks permanency. F.C.B. 194/30, Office of this Paper.

QUALIFIED Manager (29), 12 years' experience London, country, desires post, with living accommodation, country. 76 Toynbee Road, S.W.20.

QUALIFIED Manager (30); Bond Street, seaside and Agricultural experience; Radio Servicing, D. & P. and all branches of Photography; permanent progressive post; free March 7th. 162/18, Office of this Paper.

QUALIFIED Young Lady requires post as Assistant; moderate salary; locum or permanency; in or near S.E. London. 163/25, Office of this Paper.

QUALIFIED (24) desires position as Assistant or Manager; all-round experience; Midlands preferred; free immediately. Radmore, Oretton, Kidderminster.

QUALIFIED (25) seeks situation in High-class Dispensary, Hospital or Wholesale House; West-End experience. 163/34, Office of this Paper.

TILDESLEY, R. W., M.P.S., F.B.O.A., offers his active services and 30 years of practical Retail experience to those requiring a Professional Locum; booking forward from May 4. Address, "The Burlington," 168 Milton Road, Weston-super-Mare.

UNQUALIFIED, single, capable and trustworthy, seeks permanency; would invest £100 view to partnership; England or Wales; Welsh-speaking. 162/2, Office of this Paper.

UNQUALIFIED; 30 years' experience; sole control; good Counter, Prescriber, address; part, locum or whole; anywhere; moderate remuneration. 163/12, Office of this Paper.

YORKSHIREMAN desires permanency, Bradford, Halifax district; referred subject; married; good experience all branches Retail; free one month's notice. 163/38, Office of this Paper.

NAMES AND ADDRESSES.

When sending advertisements for any of the sections in this Supplement, advertisers—as a guarantee of good faith and not necessarily for publication—should always give their names and addresses. It sometimes occurs that this rule is not followed and delay and disappointment ensue. Strict attention to this detail will be appreciated.

WHOLESALE.

AVALUABLE Chemists' connection in London, Hants, Sussex and Western Counties offered to reputed house; Proprietary lines preferred; salesmanship and propaganda on neglected ground a specialty; good appearance; considerable experience; own car; salary and expenses basis. "Active," Phone: Millhill 1728.

ADVERTISER (28), tall, energetic, single, ambitious, selling ability, desires position as Representative with a firm of repute London, or South Coast; experienced in Buying, Invoice Pricing, Invoice and Account Book-keeping; 14 years' all-round Retail experience. 160/5, Office of this Paper.

MEDICAL REPRESENTATION.—Expert Propagandist, with unexceptionable credentials, wide experience amongst Physicians, Surgeons, Institutions, Clinics, sound knowledge Medicine, Therapeutics, desires re-engagement. "A.," 21 Gloucester Place, Brighton.

QUALIFIED Pharmacist (29), experienced in Medical Propaganda, seeks engagement with first-class Manufacturing house offering permanency and scope for progress; good appearance, personality; knowledge Therapeutics; interviewing ability; resident London. 163/27, Office of this Paper.

REPRESENTATIVE (31), first-class sales record, sound connection Home, Eastern and Midland Counties, is open to represent a progressive house. "R.," 63 Oakwood Park Road, London, N.14.

REPRESENTATIVE (25), with strong connection amongst Chemists, Lancashire area, seeks additional line of repute; own car. 162/8, Office of this Paper.

RESPONSIBLE Resident Representative; own car; in good standing with all past employers and clientele; Doctors, Chemists, Medicated Wines traders; Professional and/or Trade Propaganda; Sales; South, West England; open to thorough investigation. "Stability," c/o General Gordon Hotel, Weymouth.

COLONIAL, INDIAN AND FOREIGN

ENGLISHMAN resident in India offers his services to any firm of Chemical Manufacturers or other firms desiring business; 16 years' experience of all the markets and personal connection with Buyers and Importers. Reply 274/886, Office of this Paper.

FOR SALE.

(Articles to the value of £5-£50.)

"**NATIONAL**" Cash Register; prints, adds; condition as new; must sell. Write P. Sudley, 17 Thornehaugh Mews, Woburn Square, W.C.1.

THE FOLLOWING JOB LOTS FOR SALE AT BARGAIN PRICES.—6d. Toothpaste, 18 dozen; 1s. Toothpaste, 134 dozen; 1s. Brilliantine Cream, 9 dozen; 1s. Tubes Shaving Cream, 220 dozen. Write for samples, 274/907, Office of this Paper.

MISCELLANEOUS.

10s. for 60 words or less; 1s. for every additional 10 words or less, prepaid. (Box No., 1s. extra.)

A SPLENDID RANGE OF CHEMISTS' FITTINGS.—Pharmacies can be fitted complete quickly from our Large Stock of New and Second-hand Fittings; Glass Shelves, Metal Window Fittings, Sundries, etc. Send all your enquiries to H. MILLS & SONS, LTD., Chemists' Shopfitters and Shopfront Manufacturers, 163-5 Old Street, London, E.C.

A CCOUNTANT and Auditor, capable and experienced; well acquainted with the accounts of Chemists; attends to write up books, get out accounts and deal with Income tax; fees reasonable and all business treated as strictly confidential. Write or call on Cyril J. Sperry, 37 Chancery Lane, Woodside Park, North Finchley, N.12, or 'phone Finchley 3522.

CHEMISTS' FITTINGS.—We hold an immense stock of Drug Fittings, Dispensing Screens, Glass-fronted Counters, Perfumery Cases, Nests of Drawers, Wall Cases, Silent Salesmen, Upright and Flat Counter Cases, Plate Glass Counters, Cash Tills, Display Stands and Glass Shelves, etc., at Competitive prices. F. MAUND & E. BERG (SHOWCASES), LTD., Shop Fitters and Shop Front Builders, 175/9 Old Street, London, E.C.1.

FOR Quick Sale.—U-shaped Steam-Heated Drying Machine with Mixing Agitator; also similar for Gas Heating. 275/926, Office of this Paper.

FOR SALE.—Christy 1½ and 2½ Disintegrator; excellent condition. 275/928, Office of this Paper.

Price lists, trade circulars, samples, and printed matter can in no case be forwarded, the Box numbers being intended exclusively for specific answers to particular advertisements. The Publisher reserves the right to open and refuse to forward any communications received which he may consider contrary to this rule.

CLEAR OUT—your Old or Damaged Stock of Photo Goods. Why keep them any longer? Turn them into CASH.
I GIVE BEST PRICES for Old Films (damaged, fogged or expired dates); Packet Papers, Cards (any sizes), Old Photo Goods or Cameras. Bromide Papers, Plates (all sizes, all makes). Send any goods in the photo line. I buy all, good or bad. Cash per return. A good price for all Cameras. Send them along.
S. E. HACKETT, 23 July Road, Liverpool
[CHEMISTS ONLY]

FOR SALE.—Edge Runner Mill with Cast Iron Pan and two runners, 30 in. by 8 in. wide; also 3 ft. and 3 ft. 6 in. Portable Stone Mills with stones complete. 275/931, Office of this Paper.

FOR SALE.—Large Capacity Steam-Heated Dryer with internal agitator; also Jacketed Rotary Mixer and Dryer, 8 ft. long, 3 ft. diam. 275/927, Office of this Paper.

FOR SALE.—Tumbling Barrel Type Mixer mounted over Sifting Machine, with Receiving Box, all mounted in wood frame. 275/924, Office of this Paper.

FOR SALE.—Two "Griveau" Mixers, wood bodies, with Sifters fitted under and receiving drawers for sifted powder. 275/925, Office of this Paper.

FOR SALE.—Two Heavy Type Werner Mixers, Water Jacketed, size of Pans 3 ft. by 2 ft. 9 in. by 2 ft. 6 in.; also smaller capacity machine. 275/932, Office of this Paper.

FOR SALE.—Vertical Grinding Mill, with 12-in. stone; also similar with 30-in. stones. 275/930, Office of this Paper.

FOR SALE.—12-in. Krupp Disintegrator; also Harrison Carter, size "C" Four-Screen type Disintegrator. 275/929, Office of this Paper.

TABLET MACHINES.

Wanted, 2 or 3 Colton's B or other.

274/916, Office of this Paper.

WANTED.—Sifter and Mixer, Gardner make preferred; capacity about 100-300 lbs. per mixing. Lowest price and full particulars as to condition. 274/912, Office of this Paper.

£69.—SPECIAL Offer of Shop-soiled Mahogany Fittings; all in perfect condition; comprising 10-ft. Drug Fitting, 6-ft. Dispensing Screen, 6-ft. Wall Case and 10-ft. Glass-fronted Counter; cannot be repeated. Write or telephone PHILIP JOSEPHS & SONS, LTD., 90/92 St. John Street, Clerkenwell, London, E.C.1. Telephone: Clerkenwell 4111 and 4112. "Pharmacy Fitters for over a Century."

EXCHANGE COLUMN.

2d. per word, minimum 2s. (Box No., 1s. extra.)

WANTED.

FIXTURES for Shop, approx. 14 ft. by 20 ft.; scales, balances, shop rounds, etc. Particulars to M.P.S., 2 Scholes Lane, Prestwich, Manchester.

TO GET
INTO DIRECT TOUCH
with the best buyers of Drugs,
Chemicals, and allied products
ALL OVER THE WORLD
use regularly the publicity
service afforded by
THE CHEMIST & DRUGGIST

Are you near the end of your Financial Year?

IF SO, DO NOT FORGET THE

C. & D.

STOCK-TAKING PAD

(THIRD EDITION)

THE GREATEST TIME-SAVER IN THE TRADE

This edition differs from the first two editions mainly in the more convenient grouping of classes of goods in which grouping was found to be practicable : veterinary medicines, photographic goods and packed preparations are examples. In addition, the number of blank pages has been increased, so that there may be ample space for entering stock not readily seen to fall under any of the printed headings. Used in conjunction with the C. & D. Retail Price List it enables the chemist to do his own stocktaking quickly, cheaply and efficiently. Contains 54 sheets in pad form.

Price 2/6, post free

J. T. P. (23/14) writes :—" Please send me a pad of the C. & D. Stock-taking Sheets, for which I enclose 2/6. I found it a great time-saver last year."

S. P. (16/25) says :—" The C. & D. Stock-taking Pad is the best thing I have seen yet. It is useful also to form the original stock-list of a new shop, saves many hours' work and prevents omissions. I shall always use it in my pharmacies."

W. J. B. (21/18) writes :—" We had one of your Stock-taking Pads last year and found it very convenient, as it saves a great deal of trouble."

THE CHEMIST AND DRUGGIST

Publications Department

28 ESSEX STREET - - - LONDON, W.C.2

BRANCH OFFICES

4 CANNON STREET, MANCHESTER (TEL.: BLACKFRIARS 3052)

54 FOSTER'S BUILDINGS, HIGH STREET, SHEFFIELD (TEL.: 22458)

19 WATERLOO STREET, GLASGOW (TEL.: CENTRAL 2329)

155 AVENUE DE WAGRAM, PARIS, XVII^e (TEL.: ETOILE 19-79)

52 CARRINGTON STREET, SYDNEY, N.S.W.

372 FLINDERS LANE, MELBOURNE, AUSTRALIA

55A SHORTLAND STREET, AUCKLAND, N.Z.

PLANTAGE-FRANSCHELAAN 32, AMSTERDAM

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All the Popular Varieties in 3d. Pills

ANTIBILIOUS
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HEAD & STOMACH

HIERA PICRA
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JUNIPER
LAXATIVE OIL
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LIVER & STOMACH
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RHUBARB
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1 Gross 18/- Gross

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10 Gross 15/-

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Style 2.—Turned wood box,
buff label.

Style 3.—Purple flange box,
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